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THE GEOGRAPHICAL MAGAZINE

Acting Editor

Ivy Davison

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Modern Turkey

by MAJOR H. M. BURTON

History has few examples of a national recovery and reorganization so rapid and effective as that undertaken by Turkey since her defeat in the last war. A young, virile and nationally-conscious State, which has revived the traditional bonds of friendship with Great Britain, has replaced the old, declining Empire

ONCE more the eyes of the world are turned towards those narrow waters connecting the Black Sea and the Ægean, and the stalwart race that has guarded them for the past five centuries. Throughout the ages the Straits have been one of the most vital geographical and strategic factors in the affairs of nations, and have profoundly influenced the course of world-history. It is obvious, therefore, that the fortunes of the nation in whose territory they are situated must be of considerable interest to the world at large. It is all the more surprising that so little is generally known of the remarkable revolution which has taken place in the national life of Turkey during the past twenty years—a revolution whose effects

on the life and thought of the people transcend any of the national upheavals which we have witnessed during the past quarter of a century.

This 'revolution' was the result of the third attempt within the last hundred years to reform Turkish administration, and the remedies applied on this occasion were really drastic. For the plight in which Turkey found herself at the end of the last war was indeed tragic. But the Turk is above all else a soldier and a patriot, and will always fight if his hearth and home is threatened. Inspired by the leadership of that dynamic personality, Kamal Atatürk, himself a soldier, the Turkish nation was able to rise from the ashes of the Ottoman Empire and set up a young Republic on prin-



Toni Muir

Istanbul, capital of the old Ottoman Empire, from which the last Sultan fled in 1922. Kamal Atatürk, founder of the new Turkish Republic, subsequently made Ankara the seat of government



All photographs by courtesy of the Turkish Embassy

The northern end of the Golden Horn, an arm of the Bosphorus, seen from the cemetery at Eyoub

ciples hitherto unknown to them. The way was prepared for this by the flight of the Sultan from Istanbul in November 1922, which enabled Atatürk to present the National Assembly with a *fait accompli*, and to persuade the Assembly formally to abolish the Sultanate. This was followed in March 1924 by the abolition of the office of Khalif, which in its turn paved the way for the complete secularization of the State. Kamal Atatürk, who had brilliant qualities as a soldier, proved himself to be a most wise and far-sighted statesman as well as an able administrator. He had all his life been firmly opposed to foreign interference in the internal affairs of his country, and contended that the Turks were perfectly capable of managing their own

affairs. That his confidence in the abilities of his fellow-countrymen was justified has been fully demonstrated in recent years.

The Constitution drawn up by Atatürk and passed into law in 1924 bears some resemblance to democratic institutions, although from superficial observation one might be inclined to doubt it. In practice the country was dominated, from the foundation of the Republic in 1923 until his death in 1938, by the remarkable personality of its founder. That he wished to train the nation for government on democratic principles can be seen from the premature attempt made in 1930 to create a controlled opposition, which had to be abandoned owing to reactionary disturbances. The experiment has, however, been

revived since the Atatürk's death, with the approval of the People's Party. The general outlook of the people, and the atmosphere of the government and administration may be described as fundamentally democratic.

The central governing body in Ankara is the National Assembly, or *Kamutay* as it is now called in Turkish. Elections are held every four years under the guidance of the People's Party, which is the only political party in the country. The people elect what are known as 'secondary electors', and it is the latter who

actually elect the members of the Assembly from candidates put forward by the People's Party. Most of the deputies are members of the People's Party, but a few are elected on account of special or technical qualifications. Deputies are encouraged to move about the country and keep in touch with their constituencies, thus keeping the Government informed on public opinion, which now carries more weight in Turkey than many people imagine.

The Republican People's Party, although the only political party in Turkey, does not



Government offices at Ankara: part of a plan embracing wide avenues and plantations of trees

function in the same aggressive manner as the Fascist or Nazi parties. It was founded by Atatürk to provide a medium through which the more progressive and politically minded elements of the population could express themselves. The Party takes an active part in the administration of the country, and its structure is essentially democratic. The six principles of the Party are Republicanism, Nationalism, Popular Sovereignty, State Socialism, Secularism and Revolution, and these principles also form the basis of the Constitution, and

are expressed by the Party badge consisting of six white arrows on a background of red.

The President of the Republic, who is also President of the People's Party, is elected by the National Assembly for a period of four years. Kamal Atatürk held this office from the foundation of the Republic in 1923 until his death in 1938, when he was succeeded by his old comrade-in-arms İsmet İnönü, who had been Prime Minister almost continuously for the same period.

The principal medium for cultural activities



View from the terrace of the Ethnographical Museum, Ankara. The statue is of Kamal Atatürk





(Above) Peasants harvesting at the foot of Mount Ararat, on the summit of which Noah's Ark is said to have rested

(Opposite) Hilly country in Anatolia



Though, as here between Kars and Artvin, the old rough roads and simple farmsteads remain—

are the People's Houses (*Halk Evleri*) and People's Rooms (*Halk Odalari*) scattered throughout the country. These institutions are under the influence of the People's Party, by whom they are largely directed, but anyone is free to join. They play a very important part in developing adult education, and stimulating an interest in the arts.

The modern Turkish Republic consists chiefly of Asia Minor, or Anatolia, but also includes a strip of Eastern Thrace on the extreme south-eastern corner of Europe. The total area is about 296,000 square miles, or more than three times the size of Great Britain. The total population at the last census in 1935 was just over 16 millions, an increase of 18 per cent on the 1927 census. This was due to immigration, and also to the

fact that many people in the more remote districts were not included in the previous census. It is estimated that the population has further increased since 1935 to about 18½ millions, partly owing to the acquisition of the Hatay in July 1939, combined with the continued immigration, and the fact that Turkey has one of the highest birth rates in the world (23 per thousand).

The interior of Anatolia consists of a central plateau, rising in the eastern districts to a mountainous mass with peaks up to ten and twelve thousand feet, culminating in Mt Ararat (over 16,000 ft.), near the frontiers of U.S.S.R. and Iran. Lake Van lies at over 6000 feet above sea-level. The central plateau is extremely arid in the summer, and in winter bleak, exposed and frequently



—new roads and bridges also contribute now to a harmonious landscape: the Zonguldak-Bartın road

covered with snow. In the region of the salt lake, between Ankara and Konya, it is almost entirely desert.

In such conditions it is not surprising that the Anatolian peasant is tough and wiry, and that Turkey can turn out soldiers who have always been the admiration of the world. For the interior of Anatolia much resembles the steppes of Central Asia, whence the Seljuk and Ottoman Turks originally came, and where numerous Turkish-speaking besides other Turanian races still dwell.

The central plateau of Anatolia is surrounded by a coastal plain, and on the southern frontier it falls away to the plains of Syria and Iraq. Many of the hilly and mountainous regions, particularly in the west and north, and also the Taurus range in the

south-west, are well wooded in spite of extensive deforestation in the past.

The climate of Turkey varies from a temperate Mediterranean character on the north and west coasts to the extreme summer heat of the Mesopotamian plains in the south, whilst the bleak steppes of the central plateau, and the mountainous regions in the east, produce extremes of heat and cold. The rainfall on the north coast is abundant, but much rain is prevented from reaching the central plateau by mountains between it and the coastal plain.

As might be expected from the climate, the products of the soil vary considerably. The central plateau produces chiefly grain, and in this area also livestock are raised, including the famous Mohair goat. Tobacco, the leading Turkish export, figs, raisins and many



The pastures of Karaman, which produce a breed of sheep famous for fineness of wool and meat



Spring carpet of wild flowers with the Taurus Mountains in the distance



Remains of the Roman aqueduct near Izmir



Istanbul: St Sophia and, in the foreground, the Sultan Ahmet Mosque



The Zonguldak coal works, developed as part of Atatürk's four-year plan of 1938, will play an important part in the development of Turkey's heavy industries

other kinds of fruit, and opium are grown along the north and west coasts. Cotton is extensively cultivated in the Cilician Plain, round Adana and Mersin, and is being actively encouraged by the Government, who are engaged in the construction of large irrigation works in this region. The eastern highlands are chiefly occupied with stock raising, though the recent discovery of oil in the south-east, near Siirt, together with the extension of the railway to Van, will no doubt transform these more undeveloped provinces in due course.

The principal mineral resources of Turkey are coal, chromium, copper, iron, lignite, lead and zinc, but their exploitation was much

neglected before the foundation of the Republic. The annual production of the Zonguldak coalfields, for example, rose from about 600,000 tons in 1923 to 2,500,000 tons in 1938. Exports of chromium ore, which were only 3400 tons in 1923, had risen to 192,000 tons in 1937. Although Turkey is primarily an agricultural country (four-fifths of the population depend entirely on the land for their living), and it was chiefly to the peasants that Atatürk appealed for support in the Revolution, the Government has paid great attention to developing the industrial resources of the country. In 1933 the Government launched an Industrial Five-Year Plan with the object



It is not necessary to travel far from Ankara to find another industrial undertaking successfully carried out: the Çubuk Dam, which lies north of the capital

of expediting the industrialization of the country, and increasing its economic self-sufficiency. This was followed by a New Four-Year Plan in 1938. A most important part of this latter plan was the development of the Zonguldak coal area, on the Black Sea coast, and the opening, in September 1939, of a large steel and iron works at Karabuk, about 100 miles inland and connected by rail with Zonguldak. These works, constructed by an English firm, will play an important part in the future development of Turkey's heavy industry. A Three-Year Plan for the development of mineral resources was announced by the Turkish Government in 1937, to be

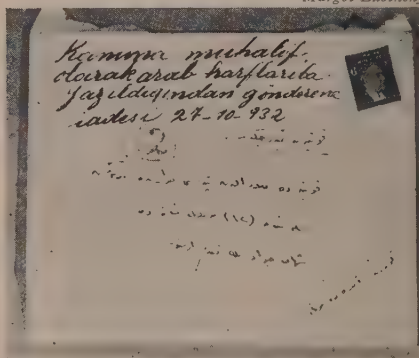
operated through one of the State Banks called the Eti Bank, which was also made responsible for developing the power resources of the country.

In the past, communications in Turkey were extremely poor, but under the Republican regime great strides have been made with the construction of railways. Before 1923 the only railway tracks were the Berlin-to-Baghdad line through Adrianople, Istanbul, Eskişehir (with a branch line to Ankara), Konya, Adana, Aleppo and along the Syrian frontier as far as Nusaybin, whence there was a gap to Kirkuk and Baiji in Northern Iraq. There was a line connecting the Berlin-Baghdad



(Above) Agricultural College in Ankara—Turkey is still mainly an agricultural country. (Left) Higher education embraces business training for both sexes: at a commercial college in Ankara. (Below) Kamal Atatürk abolished the use of Arab script. This letter addressed in that script was returned to the writer with a note to say that it could not be delivered unless addressed in Latin characters

Margot Lubinsky



track with Smyrna, and some local branch lines in the western part of the country, besides a narrow-gauge track constructed by the Russians from Kars to Erzerum. Since 1923 the length of railway lines has been more than doubled, and the central part of the country is now well served by rail communications, such important centres as Kayseri, Sivas, Malatya, Diyarbakir, Samsun, Erzincan and Erzerum all being connected with the capital. The Berlin-to-Baghdad railway which had reached Mosul in March 1940 was finally completed in June 1940, when the first through train from Baghdad arrived in Istanbul. Many more lines are under consideration, notably one across the northern part of the country to connect the Zonguldak-Karabuk area with the port of Samsun, and Amasya with Erzerum and Trabzon. It is also proposed to extend the line from Diyarbakir to Siirt and Van.

Road communications are not so well developed, and few roads are macadamized. The Government has recently constructed an excellent motor road from the port of Trabzon on the Black Sea to the Iranian frontier, which is of great importance to the Middle

East generally; and a ten-year plan for the development of roads throughout the country has recently been announced.

The Turkish Republic is a young state, imbued with the enthusiasm and ambitions of youth. The Turks have found their feet and established a sound commercial reputation during the comparatively short time they have been masters in their own country. England and Turkey are old and traditional friends, and the revival of Anglo-Turkish friendship, which was strongly encouraged by Atatürk himself, is a source of genuine satisfaction to both Turks and English, who have many characteristics in common. The number of Turks who can speak English has increased considerably in recent years, and one frequently meets quite young children who are studying the language. The attitude of the overwhelming majority of Turks towards the present struggle is wholeheartedly in sympathy with the democracies, and, should they be called upon to defend their independence, it may be anticipated confidently that they will emulate the magnificent feats of their Finnish cousins and their Greek friends.

Music while you eat in a Turkish restaurant: the pianist of a ladies' orchestra

Black Star



The Story of the Panama Canal

by RENÉ ELVIN

FRANCE is slowly recovering from the blows inflicted on her by a lost war—for the date is May 1879, and we are at the International Congress for the Study of Inter-oceanic Canals, which has just met in the hall of the Geographical Society in Paris. There is something in the air, something thrilling and magnetic, which seems to centre in the imposing figure of the President of the Congress, Ferdinand de Lesseps. The builder of the Suez Canal, now in his 75th year, is as full of enthusiasm and energy as ever. No resting on his laurels for him. What matter if France has suffered a severe defeat and been cruelly mutilated? The Third Republic will rise from the ashes of the Second Empire, nay, it is rising, and the Universal Exhibition of the previous year has shown the world that France is still a great nation and one to be reckoned with in world commerce. But something more is required to give her back her standing in international politics, something arresting and spectacular, and what could be more so than a pendant to the one great achievement of the abolished régime? There is an irresistible parallel between Suez and Panama, the waist-lines of the Old World and of the New, which should both become the life-lines of world trade and shipping. And have we not still among us him whom all his compatriots delight in calling 'The Great Frenchman', the man who achieved the seemingly impossible by undertaking the one enterprise and who therefore can be relied upon to carry out the other?

THE SCHEME IS APPROVED

And so, after a fortnight's earnest debates—on May 29, 1879—the Congress approves, amidst intense excitement, the scheme for a sea-level canal across the Panama isthmus, at a cost estimated at about 1200 million gold francs, to be built within twelve years, or perhaps eight if the machinery works to expectation. So tense has the atmosphere become that the twelve delegates who vote against the project are booed, while the seventy-eight 'ayes' are enthusiastically acclaimed.

There was some justification for the

emotional display I have described, and for the pats on the back the delegates gave each other for having "deserved well of humanity". For the Panama Canal had been one of the dreams of the maritime world ever since America was discovered. If this narrow waist of 44 miles could be broken through, an enormous saving could be effected for shipping: from New York to San Francisco, the distance through the Straits of Magellan is 13,135 miles, as against 5262 miles through Panama, an economy of 60 per cent! Even for ships sailing from Europe, the distance saved is considerable: from Liverpool to San Francisco the sea route via Magellan measures 13,502 miles as against 7386 via Panama, forty-two per cent less.

AFTER FOUR CENTURIES

But it might be said that the very discovery of America was almost a by-product of the search for a passage to the Far East. So persistent was the idea that there must be a waterway to the East that many years were to elapse before the search was given up and, when at last it became certain that Central America was an isthmus, the Spaniards immediately thought of digging a canal through it, and lost no time in building a road from Panama on the Pacific to Nombre de Dios on the Atlantic, vestiges of which still exist.

When, half a century later, the Spanish governors of Central America suggested to Philip II the excavation of a canal, he set his face against the idea, arguing that it was ungodly, the Almighty having clearly shown His will by creating a continuous isthmus. And thus the project fell into abeyance for four centuries.

It was not until the Spanish colonies of America had shaken off the yoke of the motherland and the United States had proclaimed the Monroe doctrine that interest began to revive in the idea of a trans-American waterway.

Numerous schemes were mooted both by Americans and Europeans. Among the latter, French promoters were well to the fore, the most unexpected being the future



One glance at a map giving sea routes shows the importance of the Panama and Suez Canals

Napoleon III, who, from the prison in which he was detained after the abortive insurrection of 1846, wrote to King Louis-Philippe, offering to renounce politics if he could be released to build the Canal.

The territory of Panama belonged at that time to the Republic of New Granada (later renamed Colombia), and the long and arduous route to Bogotá, the capital, which then took weeks on muleback, was assiduously trodden by eager concession-seekers. Neither these nor the politicians who granted them were over-scrupulous, and two concessions were granted for the building of a railway through the Panama isthmus: one in 1838 to a Frenchman named Salomón and another ten years later to an American called Aspinwall. The latter was granted for forty-nine years and later, in 1867, extended to ninety-nine years, so that it is still in force. I shall have more to say about it presently.

Meanwhile the Governments were not inactive, and the United States concluded in 1846 a treaty with New Granada conceding free right of transit for all forms of present and future communication. This made the British Government 'sit up and take notice', and some hard bargaining took place between the American Secretary of State, Clayton, and Lord Palmerston. The negotiations resulted

in the Bulwer-Clayton Treaty of 1850, which laid down that any building of a Canal through Panama should be carried out under the joint auspices of both Governments; that the Canal Zone should be neutralized and remain unfortified, and that 'fair and equal terms' should be granted to both partners.

The rapid development of the western states of the Union led the United States Government to give more and more attention to a maritime route to the West via Central America: from 1871 to 1876, several surveys were undertaken, resulting in a plan favouring a canal through Nicaragua.

FERDINAND DE LESSEPS TRIES AGAIN

If France was to have a hand in the building of the Canal, it was imperative that something should be done without delay. In 1876 the Paris Geographical Society therefore formed the Société Civile Internationale du Canal Interocéanique de Darien to make a complete survey, obtain a building concession from the Colombian Government and report to the Society. The results obtained formed the basis of the discussions of the Congress already mentioned.

The preparatory work had been well done. The concession had been duly obtained and

ratified—with one proviso, which was later to prove a snag: this proviso made the concession dependent on the agreement of the Panama Railway Company. The survey was ably completed under the supervision of Bonaparte Wyse, a grand-nephew of Napoleon, the alternatives (of which there were about 50) being carefully studied, especially the four main ones: Darien, Panama, Nicaragua and Tehuantepec.

The task of the Congress was to settle the course of the Canal and to provide ways and means for its construction. Of the alternatives, Panama was one of the more arduous courses, but it was the shortest and it did not necessarily entail the building of locks. Now Lesseps, after the success of the Suez Canal, had become infatuated with the idea of a sea-level waterway, which he called his 'oceanic Bosphorus', and his authority over the Congress was decisive.

Once the Congress was closed, Lesseps thought that his responsibilities were over. But he had reckoned without the promoters, who knew that his popularity was their greatest asset and that the whole project would collapse without him. Pressure was therefore brought to bear upon him from all sides: from the greatest French writer of that time, Victor Hugo, down to the cab-drivers, all insisted that he owed it to himself, to his countless admirers, nay, to France, to complete the great work.

A DIFFICULT START

We have seen that the Congress had decided in favour of a Canal to cost about 1200 million gold francs, of which slightly more than half were earmarked for engineering expenses. On the credit side it was estimated that, at the end of ten years, the traffic would amount to $7\frac{1}{2}$ million tons, which (the toll being fixed, as for Suez, at 10 francs per ton) would bring in gross receipts of $72\frac{1}{2}$ million francs. (This was a modest estimate: the traffic, in the last few years before the present war, came to a regular 28 million tons yearly.) The amount of capital required, however, was staggering, especially when one recalls that the whole capital of the Suez Canal Company was 'only' 200 million francs, or six times less. But Lesseps was not the man to let a paltry milliard of francs stand in his

way. Having formed his new *Compagnie Universelle du Canal Interocéanique de Panama*, he first had to find money. Remembering how, twenty years earlier, he had, when snubbed by the bankers, found support among the people at large, he resolved to apply again to the holders of small or medium savings. Alas! conditions were far less favourable than in 1858, and the subscription, viewed with suspicion or at best with indifference by both the banks and the press, was a complete failure. Though Lesseps appealed only for 400 million francs, one-third of the required capital, the subscription brought in only 30 millions.

A lesser man might have been discouraged. But not Lesseps. He knew by experience the value of publicity, and started a vast (and expensive) propaganda campaign. First came the publication of a fortnightly magazine, the *Bulletin of the Inter-oceanic Canal*, which reflected the bold optimism of the founder. Then a whirlwind lecture tour brought the gospel of the Canal to all the more important French cities. Appreciating the appeal of dramatic gestures, and anxious to 'prove' that the climate of Panama was not as unhealthy as his detractors made out, he decided to go there with his wife and three of his young children (he had, I believe, seventeen in all). His journey was a triumphal progress, complete with fireworks, troop



Stanford, London

THE STORY OF THE PANAMA CANAL

reviews, and the pomp and circumstance usually accompanying the tours of a monarch. A bishop blessed the spot where the Canal was to emerge into the Pacific, and Lesseps' pretty daughter, Ferdinande, turned the first sod. He returned by way of the United States, where, though he was hospitably welcomed, he got no financial support. In fact, the Americans did not disguise their hostility to the idea of Frenchmen building this American waterway, and President Hayes, after courteously receiving his visitor, declared that he advocated a canal under American control. Nevertheless, Lesseps wired to the *Bulletin* that he had found 'enthusiastic and unanimous adherence' to his cause in the States. He completed his journey by visiting England, Belgium and Holland. On his return he decided to fix the capital of his Company at 300 million francs and to appeal again for public money. This time, however, he played the financial game according to the bankers' rules. No less than 32 million francs were spent on commissions to the underwriting syndicate, on banquets, festivities and other, more permanent, 'inducements' to the press, which waxed accordingly rapturous. The result was that the subscriptions covered twice the amount of 300 millions asked for!

Lesseps was no engineer. In fact, he did not like technicians, and his one idea was to

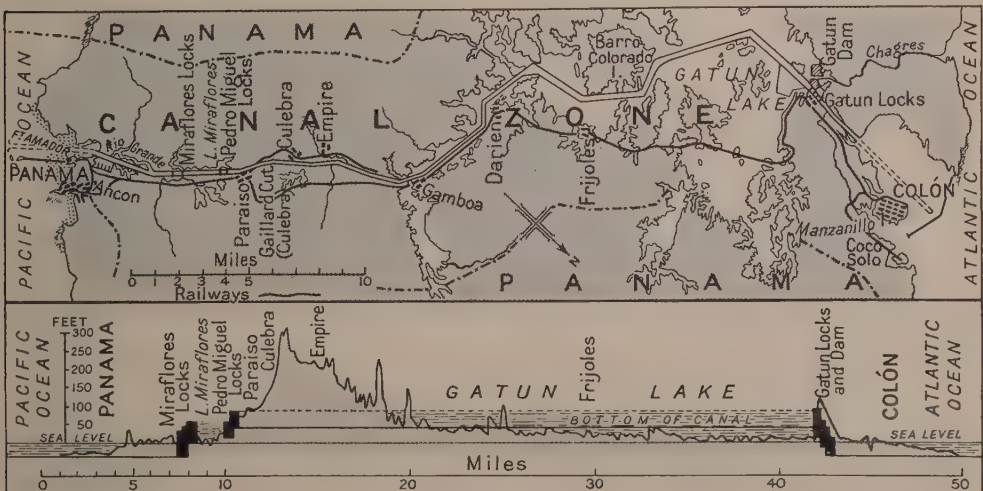
get the engineering work off his hands by entrusting it to the same contractors, Cuvreux & Hersant, who had worked with him at Suez. Cuvreux & Hersant were just as eager to take it on, and excavating began on March 12, 1881.

Eager though they were to undertake the building of the Canal, the contractors were business men. They had agreed to do it for a lump sum of 512 millions—but with the proviso that they were allowed to withdraw from their contract after two years: the difficulties they encountered were such that they were only too glad to do so.

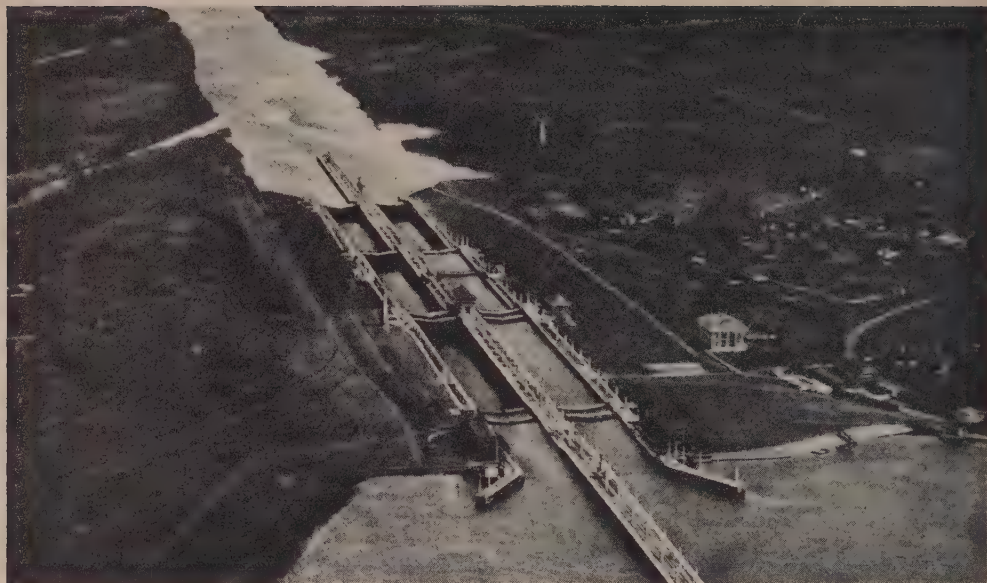
Another setback was soon to follow. The Concession had to be ratified by the Panama Railway Company, which had to be bought out at the price demanded by the shareholders. The final disbursement amounted to over 100 million francs.

A PACK OF NEW TROUBLES

The Company, having failed to secure a general contractor for the enterprise, had to tackle it with the help of small sub-contractors and found itself confronted with a labour problem. White men could only be used in engineering or clerical positions; the Indians proved impossible; the Chinese, as soon as they had saved a few dollars, left their jobs and became shopkeepers or even sub-contractors. The negroes from the French



Stanford, London



E.N.A.

When in 1886 it was found that a sea-level canal was impossible at Panama, a system of locks was substituted: aerial view of Gatun Locks looking east towards Limon Bay

West Indies were useless and those from Jamaica not much better; but the Company had to 'make do' with them, with the result that it had to hire 40,000 negroes to do the work of 15,000 hands.

On the other hand, the French engineers employed by the Company were highly efficient: Dingler, Léon Boyer, Jacquier, Philippe Bunau-Varilla, were as proficient technicians as they were able organizers. But few of them were able to work for long, for, though they could cope with the most grievous difficulties, they had reckoned without two tiny factors—the *Stegomyia calopus* and the *Anopheles* mosquitoes, carriers respectively of yellow fever and malaria.

Dingler, the engineer-in-chief, lost his wife, his son, his daughter and her fiancé within a few weeks; his successors, Blanchet and Boyer, died a couple of months after their arrival; thirty engineers landed in October 1886: thirteen were dead the next month. The British Consul at Panama once went with an engineer to inspect the work in progress, together with twenty-two men. Twenty of these fell ill, and ten of them died. Only two men returned to Panama: the Consul and the engineer. Next morning, the former

invited the latter to lunch: he waited in vain: the engineer had died during the night. But the work went on, and it speaks well for French tenacity and courage that, for eight years, all the casualties, which at times amounted to forty a day, were made good by fresh arrivals of new men from France.

In the construction of a sea-level canal, two main difficulties arose: the river Chagres, the course of which was to be utilized for part of the way, became, when in flood, a raging torrent which more than once seemed about to destroy the outcome of so much labour. But the major problem was presented by the Culebra Cut, where huge landslides kept annihilating the work as fast as it was done.

By 1886 it became clear to all the engineers concerned that the original conception of a sea-level canal was impossible, and that the only way to finish the job was to resort to a system of locks. But Lesseps deemed that his reputation was bound up with the building of a sea-level canal.

THE CRASH

In the first few years of its existence, Lesseps' Company had obtained without any

trouble the money it needed through the sale of bonds of 500 francs bearing 3 per cent, later 4 per cent interest. They were first easily disposed of at par and, up to the end of 1883, the annual receipts amounted to nearly 150 millions. But the failure of an important bank, *L'Union Générale*, and the ensuing depression of the markets, depleted the traditional French 'stocking', while rumours began to spread about the difficulties the Company was facing at Panama, especially at the Culebra Cut. In spite of Lesseps' prestige, the price of the bonds began to slip, declining as low as 160 francs for a nominal value of 500, while the sale of new bonds, in spite of every added inducement, became increasingly difficult. Something new and spectacular became necessary. And so, at eighty-one, Lesseps again undertook a cavalcade through Panama, which he led prancing on a white charger, and even galloping up the steep slopes of the Culebra Cut. On his return, he asked the French Government to authorize the issue by the Company of a new lottery loan.

It was at this juncture that politics became inextricably mixed up with the affairs of the Company.

As Parliament dallied with the authorization for the lottery and the treasury of the Company was at a very low ebb, Lesseps had first to issue bonds redeemable at double their subscription price, which, however, brought in only half the sum he needed. In desperation he first agreed to the principle of a canal with locks, because a sea-level waterway could always be constructed later, and then again appealed to the Government for a lottery loan. Lesseps had always been inclined to buy or bribe off any opposition that offered. He now poured out largesse to politicians on a scale that made honest deputies suspect the whole Panama business, which, at that time (November 1887) might still have been saved, for the prestige of France in America and in the whole world, as well as nearly 1000 million francs of French savings, were at stake, while all the technical authorities were agreed that the completion of the Canal was feasible within a reasonable time.

Thanks to wholesale bribery, the lottery loan was authorized. It was a failure—the

beginning of the end. Every possible device was tried, but to no purpose, and, on February 5, 1889, the Tribunal of the Seine Department decreed the liquidation of the Company.

THE SCANDAL

Panic seized share- and bond-holders, politicians and all who had had relations with the Company. Petitions and complaints began to pour in. Parliamentary inquiries and judicial investigations were instigated and, on November 21, 1891, summonses were issued against Ferdinand de Lesseps, his son Charles, and several of the directors of the Company for fraud and corruption. Ferdinand de Lesseps, being a Grand Officer of the Legion of Honour, was not, like his son, actually arrested. In spite of a dignified and skilful defence, father and son were convicted to the maximum sentences: five years' imprisonment, the other accused coming off somewhat more lightly. Fortunately for them, the sentence was never carried out, being quashed on June 18, 1893, on a technicality.

A Select Committee of Inquiry was appointed, and its findings uncovered more and more shady dealings. Ruined and dishonoured, 'The Great Frenchman' died the next year of a broken heart. Many politicians and financiers fled the country or committed suicide.

AMERICA TAKES A HAND

To rescue what could be salvaged from the disaster, a new company was formed, mainly to obtain from the Colombian Government a renewal of the concession, which was valid only until 1893, and to keep matters going until an opportunity offered to sell out to America.

After much discussion about the route, a volcanic eruption in Nicaragua decided the American Senate in favour of Panama and the House of Representatives, in June 1902, concurred.

Though the Bulwer-Clayton Treaty of 1850 had stipulated that the canal should only be built under the joint control of England and the United States, England was ready to come to terms, and the old covenant, born of suspicion and distrust, was replaced by the Hay-Pauncefote Treaty, which proved to be a turning point

in Anglo-American relations. It gave the United States the exclusive right to build the Canal, with the proviso that all nations could have the use of it on equal terms. Unlike the International Convention regulating the Suez Canal, the Treaty laid down no stipulation to cover war, which, in practice, meant that the U.S.A. had the right to close the canal in war-time and to erect fortifications for its defence. The present war situation, and the cordiality now happily reigning in the Anglo-Saxon world, bear witness to the wisdom and forethought of the signatories to this agreement.

The negotiations with Colombia proved far more difficult and were not concluded without a (bloodless) 'revolution'. In the end the U.S.A. were granted full control over the Canal Zone, a strip of land five miles wide on each side of the waterway, in return for an indemnity in cash and a guarantee of the Colombian Republic's independence.

SETTING TO WORK

Even American engineering efficiency was at first unable to cope with the impact of vested interests, the entanglements of red tape and the fumbling inseparable from the beginnings of any mighty enterprise. The principle of a canal with locks was promptly adopted, the plan corresponding closely to that recommended to the Geographical Congress of 1879 by a French engineer named Godin de Lépinay, the first step of which consisted in the damming of the Chagres River and of the Rio Grande. But though, technically, all was plain sailing, political interference at first so bungled the whole undertaking that the first two chief engineers resigned in disgust.

At last, in 1907, it was decided that only autocratic methods could achieve the desired results. A distinguished officer from the Corps of Engineers, Lt.-Col. (later Maj.-Gen.) George Washington Goethals (1858-1928), was made Chief Engineer and given almost dictatorial powers. He was to prove an expert, not only on the technical aspect of canals and locks, but, more important still, in dealing with men. For seven years, until the completion of the Canal in 1914, he worked harder than any of his labourers, supervising every detail with a master eye. He could be quite ruthless, but,



Life Magazine

Batteries of long-range guns, in well-protected emplacements, are placed at strategic points on both shores of the Panama Canal

as every workman found out, he was fair and humane. These qualities were decisive. From the moment he took over, in spite of setbacks, there never was a moment's doubt about the ultimate success.

Even before his assumption of full responsibility for the building of the Canal, one of the major and most tragic problems that had baffled the French had been successfully coped with: the mosquitoes. The American Military Medical Service, under its Director, Colonel Gorgas, setting to work in 1904, dealt with them so ably and efficiently that, by the end of the next year, yellow fever had been stamped out and malaria brought under control.

If the recruiting of the 5000 'officers' of this army of peace was thus rendered fairly easy, that of the 45,000 men was just as difficult as in the days of the French Company. The solution was found in the enlistment of a force of 8000 hard-working, frugal Spaniards from the Basque Provinces to set the pace;



E.N.A.

Passing through Miraflores Locks on her world tour in 1931—the 40,000-ton battleship, H.M.S. Nelson

Italians and Greeks of the same exemplary disposition completed this staff of 'N.C.O.s', who were, after a time, able to instil into the West Indian negroes something of their own industrious spirit.

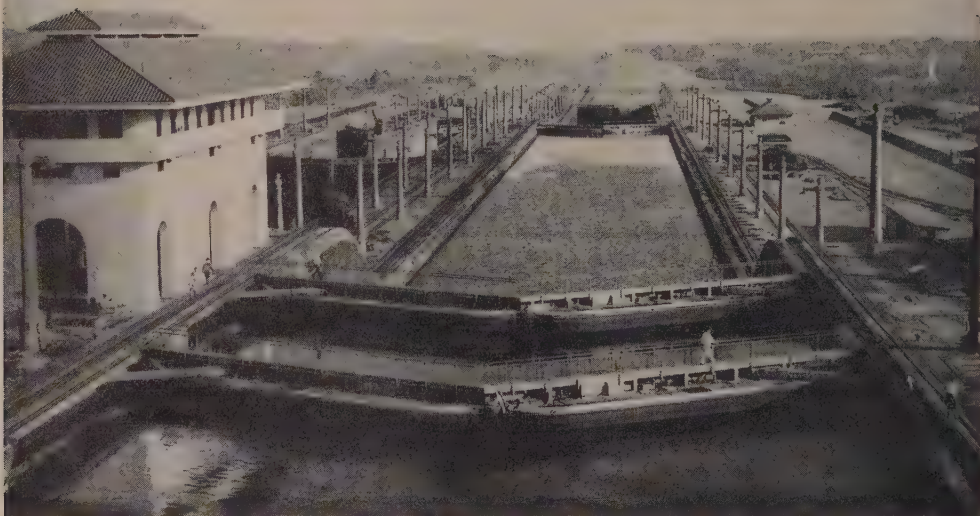
With all the financial power of the United States at their back, with the previous experience, the maps, calculations and some valuable equipment of the French Company at their disposal, the work soon began to forge ahead. Even so, the difficulties which had dogged the path of the French Company were not spared the American constructors. The landslides at the Culebra Cut continued, piling up masses of earth to be excavated. The Miraflores and Gatun Locks, and the Gatun Dam, were undertakings of a magnitude of which one small detail may give some idea: on top of the Gatun Dam, which has been covered with turf, a complete 18-hole golf course has been built!

After seven years' toil, the great work was done, and, on the very day of the outbreak of the last war—August 3, 1914—a sea-going vessel, the *Cristobál*, made the first journey through the Canal, which, on August 15, was officially opened to navigation. The

total cost of the Canal, including the payments made to the New Company and to the Republic of Panama, amounted to 273 million dollars. This sum, of course, is exclusive of the very considerable expenses of the military defence of the Canal Zone, which American journalists have vividly if ungrammatically called, with some truth, 'the most strategical point of the Western hemisphere'.

A LOOK AT THE CANAL

As I have said, the Panama Canal, unlike Suez, is not the artificial Bosphorus so tenaciously contemplated by Ferdinand de Lesseps. The traveller passing through it gathers the impression of gigantic mechanism, something out of the early works of Mr H. G. Wells, and he never ceases to marvel at the huge Gatun Locks, arranged in two sets of three, each 1000 feet long and 110 feet wide, faintly evocative of broodingnagian stairs. Whereas, at Suez, the passenger looks out on a seemingly limitless desert, with nomads occasionally wending their way on majestic-looking camels, he is met at Panama with a jungle, so savage that it arouses some of the



Marine Photos

Close-ups of Gatun Locks. A big vessel approaching (above) and (below) in the lowest level, before entering the middle lock, after being raised 27 feet

E.N.A.



awe once inspired by the snow-capped Alps.

When the ship has cleared Lake Gatun, she enters that bugbear of the builders, the celebrated Culebra Cut, now rechristened Gailard Cut after an American engineer. It is $8\frac{1}{2}$ miles long, and 300 feet wide across the bottom, while the width at the surface varies from 300 to 900 feet. It is a grim-looking gorge, the banks of which, streaming with water, seem ready to subside and hurl down the crags that overhang them.

Next we reach another double lock, which takes the ship down to Lake Miraflores; after that a new set of locks (all of the same dimensions as those at Gatun) bring the ship down to the level of the Rio Grande. We are here already at sea, and the level depends on the tides. The river is canalized all through this part of its course, roughly 8 miles.

In spite of the seeming complexity of the successive locks, transit through the Canal is in fact easier than at Suez. For one thing, Panama is both wider and deeper than Suez, the minimum widths at bottom level being respectively 300 and 200 feet, the possible draught 37 feet as against 34. Further, we must not lose sight of the fact that the whole Panama Canal is rather less than half as long as the Suez waterway: 50 miles including the terminal oceanic channels (or $40\frac{1}{2}$ miles from coast to coast) against 99 at Suez. Then, over half the length of the course of Panama is taken up by the Gatun Lake, where navigation is practically untrammelled. For the pilots who, as at Suez, take full charge of the ships while crossing, are here allowed to overtake one another. Nevertheless, a good deal of skill is required to manoeuvre large ships through the Culebra. At the locks, of course, the ships' engines are at standstill, the motive power being provided by the 'mules', electric locomotives running on rack-and-pinion rails on both sides of the locks, six of which are provided for every ship, two at the prow for towing, two at the stern and two amidships

for braking. The whole process is automatic, and, the machines being out of sight under the quay, the scene is somewhat ghost-like.

While the defence of the Canal Zone proper falls on the U.S. War Department, that of the approaches is the task of the U.S. Navy, the local headquarters of which are at Colón, on the Atlantic coast; they are supplemented by a naval and submarine base in a suburb bearing the charming name of Coco Solo and by a fully equipped aerodrome at Manzanillo. Batteries of long-range guns, in well-protected emplacements, are placed at strategic points on both shores. The immediate approaches to Panama are protected by the mighty Fort Amador, in front of which four eyots, now connected to the mainland by a dyke over which run a road and a railway, serve as powerful bulwarks.

But, even more than on these defences, the U.S. rely on those of the outer approaches, which, on the Caribbean side, range from Key West at the extreme south of Florida, to the new base now being erected at Port-of-Spain in Trinidad, while, on the Pacific side, the bulk of the U.S. Fleet, concentrated in the spearhead base of Pearl Harbour in the Hawaiian Islands and backed by the mainland harbours of San Diego, San Pedro and San Francisco, keeps constant watch.

Armaments alone, however powerful and ingenious they might be, would not be enough to protect so exposed and delicate a masterpiece of human skill if they were not backed up by those imponderables which, in the long run, are the most important factor in international relations. This is one of the reasons for the 'good neighbour policy' pursued during the last eight years by President Roosevelt and Secretary Cordell Hull: it is on the goodwill, understanding and co-operation of the Central and South American Republics, as much as on the prepotency they enjoy in the Western Hemisphere, that the United States rely to withstand and defeat aggressors.

The Rhythm of the Rice Terrace

by GEORGE D. AKED

A LADY who lives in Bali told me that she once heard two peasants who were building a rice field arguing as to what form the line of the banking should take, and she maintained that their difference of opinion was based solely on aesthetic considerations. Now I doubted the truth of her conclusion—on the grounds that a paddy field is essentially a functional piece of work. But the fact remains that terraced rice land is both satisfying and beautiful to look at. Why should this be so? We might say that it is beautiful simply because it is functional; but I think that some further qualification is called for.

Before analysing the character of these terraces and the effect they are likely to have on the observer, we must consider scenery in general. If a landscape is to be satisfying to both mind and eye, then apart from purely aesthetic questions of colour, form and so forth, two further factors are involved, both concerned with the difference between wild and cultivated country.

The first factor is sense of proper proportion between human activity and nature. People accustomed to civilization generally find that virgin country, though stimulating at first, quickly becomes boring. They soon require some tonic encounter with evidence of the human spirit. After weeks of immersion in the Amazon forests a man may see all





Count Castell

Panorama of rice terraces in the Province of Honan, China



Rice country is made up of level areas and open terraces, broken by dwellings and vegetation: near Lake Toba, Sumatra

The stark, ordered masses of these terraces near Lake Toba give an effect of fundamental strength and simplicity





Field boundaries tend to lie parallel with contours and so accentuate them—their rhythm is that of the land itself

The horizontal lines of terraces give to the natural shape of the hills an appearance of architectural design



the spiritual strivings of the race embodied in a baroque angel on the church of an Andean village; after long acquaintance with no greater creative achievement than the huts of squatters, he may imagine all civilization to be symbolized in the ancient terraces of the Incas that line the faces of the hills.

But a similar ennui may be caused by the disorderly proliferation of a great city. Again, the observer craves some evidence of control of a balanced relationship between man and his surroundings.

The second factor is one of scale and emphasis. The purely physiographical forms of nature seem to reflect too strongly the vastness of time and space, so that without a scale by which we can measure them—such as some familiar artifice would supply—they tend to lack meaning for us.

Many cultured peoples have, indeed, shown a sense of fitness in placing buildings or planting trees as a complement to their surroundings. This is to be seen in the landscape gardening of 18th-century England or in the disposal of churches and villages across the hills of Italy, and it might be suggested that the essential culture of the Chinese is shown nowhere more clearly than in their embellishment of landscape by the juxtaposition of architectural forms to give scale and punctuation to a scene.

Many such cultivated types of scenery have special characteristics, such as the stone walls of North England, the terraced vineyards of the Rhine and the ditches and earthworks that seam the China plains. Each of these regions has its dominant motifs which, subject to sociological or economic modifications, are produced by the demands of men in conjunction with the local elements of soil and vegetation, geological structure and climate.

Among such motifs the stepping of paddy (rice) land not merely possesses inherent qualities of design but embraces both the factors I have mentioned. And

where may this kind of landscape be found? In almost any steep countryside of South-east Asia where paddy is cultivated, or in any of those islands of the Eastern Archipelago which include Luzon, Celebes, Sumatra, Java and Bali, to which knowledge of this culture was carried, probably by Malayan immigrants or invaders, in the remote past. In each region details vary, but as it would be impossible here to distinguish all the local peculiarities, I shall view them as one representative scene.

Overlook a stretch of country traversed by two parallel valleys that descend from a steep range of hills on the left. The bed of the farther valley is hidden by an intervening ridge, but in the nearer one a small river tumbles down between rocky walls and occasionally flows out onto a more level piece of ground, where it is bordered by paddy fields. As the sides of the valley rise with increasing steepness the fields grow narrower and the interval in height between them becomes greater. On the top of the ridge, where the gradient eases, they are shallower and wider, but with the lift of the land towards the watershed they traverse the spurs and gulleys at ever shorter intervals, moulding themselves step after step into the structure of the slopes. No space is wasted. Wherever possible—sometimes in the most fantastic situations—level patches of cultivation have been carved out with the audacity that is born of need.

The mind is soothed by the evidence of a balanced and rational co-operation between men and their environment. Each field supplies a fundamental need. Here there is neither the riotous profusion of a great forest nor the mindless prodigality of a big city. Everything is the consequence of adjustment, and the cultivator, while extracting the maximum yield, is at the same time preserving and respecting his land.

The appearance of order is heightened by the relation of the fields to their setting. A rice field is a smooth and uninterrupted



The varied texture of rice fields is one of their charms. Here (above) the mud has just been ploughed up. (Below) Each tuft of newly planted rice casts its separate shadow across the water-logged earth



expanse on which there is no room for irrelevancies, so that vegetation tends to be concentrated on the steeper ground and round the villages. Over on the ridge a cluster of thatched roofs shows through its surrounding trees, and several other groups are scattered about the countryside, each forming a compact unit. This country produces two or even three crops a year and thus supports a large population in relation to the area under tillage. So the villages, though well masked by plantations, are numerous.

The only buildings among the fields are the tiny shrines dedicated to the gods of the harvest and a few small, covered platforms raised on stilts above the level of the crops. These latter serve as shelters for small boys who guard the grain from predatory creatures either by making loud noises or by agitating a network of strings stretched across the fields on poles and hung with bits of rag. Down on the level land by the river these strings are connected to a line that is slung across the water and attached to a float whose motions in the current animates the whole contraption—to the discouragement of simple-minded birds.

A little way down the hill a peasant with a pair of lumbering water-buffaloes yoked to a primitive plough is wading across a flooded field, and breaking up the saturated earth. In the distance, over a large tract that has been harvested, the ground is parched and cracked by the sun. Later on this will be flooded, so that the soil may be rendered tillable. The prime need, therefore, is for water. In this hilly country, where much of the paddy land is high above the valley and far from the streams, water may have to be brought for considerable distances by channels that start up in the valleys and contour round the hills. The fields thus tend to be formed into groups or systems, each identified with a particular source of supply.

So much for the general plan, in which the country is seen to be made up of

wide areas of open terraces seamed with clusters of dwellings and vegetation. Next we must notice how the terraces emphasize the structure of the land.

The planning of the fields is essentially functional, the result neither of individual caprice nor an arbitrary system of land tenure. Each division must form a horizontal plane, so that if the maximum surface is to be constructed with a minimum of effort the lay-out must be determined by the nature of the ground. Thus the boundaries as a rule lie parallel to the contours and accentuate them, while their rhythm is that of the land itself.

I remember noticing a peculiar effect of this emphasis during a flight from Yunnan into Szechuan. As the plane descended from the tawny ridges that flank the Yangtse, the country ahead showed as an expanse of unbroken green; but below—in the transitional belt that fringed the mountains—the vast plain was dotted with small hills which looked like mole-casts on a lawn. Each hill was terraced to its summit with brown fields, and in the flats between them was the bright green of paddy. Every field was bordered by a dark strip of banking, and as they all followed round the curves of the hills and each was a shade darker than the one below it, the whole panorama had the character of an immense relief map with all the contours drawn in.

But to go back to our representative landscape: where the terraces lie above the level of the eye, their horizontal lines give to the otherwise irregular masses of the hills an appearance of architectural stability which steadies the equilibrium of the whole scene. Of the terraces which lie close above us only the vertical faces are visible. Some are of recent construction, with walls of almost bare earth relieved only by a few patches of moss or sparse grass. Their stark masses and the repetition of their planes round the farther hillsides give an effect of fundamental strength and simplicity. But



(Above) In Yunnan the planters, extended across the field, work backwards. (Below) Planting rice in the Toradja highlands of Celebes. The Toradjas are careful cultivators; their method of using a pole to help in the spacing of plants is unusual. Note the tone-pattern of light and shadow in the rice shoots



below us, where the slope eases and the steps spread out into broad, flooded expanses, this effect is counteracted; for there the still water holds the reflection of the sky, so that the solid earth disappears and the borders of the fields become a network of lines extended over a strange vacancy.

The rhythm of the terrace walls is emphasized by their repetition, and this repetition is echoed in the setting of the young rice plants. If we follow an irrigation ditch round the hillside we shall find a group of people setting out the young shoots. Each planter carries a bundle of seedlings that have been taken up from a thickly-sown nursery, then docked and tied into bundles. In an extended line the planters wade slowly backwards across the flooded field, setting each plant in alignment with the rest. But as each individual tends to deviate slightly from a straight line, so—just as a hand-made article is less rigid in form than a machine product—the pattern of the planting is not a hard, mechanical thing, but a series of repeated or delicately modulated rhythms. It is surprising how much these subtle variations add to the beauty of the field.

As we continue our walk the late afternoon sun is projecting the shadows of the terrace steps across the fields. In the middle hours of the day the colour of the rice lacks richness and the absence of shadow reduces the forms to flatness; but now the terraces stand out in bold relief, and their sharply lit edges are picked out against the shadowed slopes. In the sunlit places each tuft of young rice casts its separate shadow across the water-logged earth, and the low rays striking across the taller crops accentuate their texture and give an added richness to their colour.

In regions where growth is seasonal the whole countryside shows only one stage of cultivation at a time; but here there are two or even three crops a year and every phase may be seen in contrast. The colour of the land ranges from the dun of

dry earth and stubble, or the purples and browns of mud, to the reflected tints of the sky, and on through a diversity of greens to the warm flush of harvest. Perhaps the most attractive stage is when the fields have just been planted; then, as the tone of the surface varies from dark earth to mirrored cloud, and again from light to shadow, the young seedlings stipple a dark pattern over a polished surface or sow stitches of vivid green against a velvety background. And all this is varied again by the direction of the light. Everywhere a simple theme is accentuated by repetition and enlivened by infinitely subtle changes of tone and pattern.

At this stage we should do well to follow the labourers back to the village. If we were to find ourselves benighted in this labyrinth of fields, all considerations of their beauty would be swamped in prejudices against their inconvenience.

There has been no time to notice the diversity of religious ceremonies, of granary design, of methods of planting and harvest and so forth which, differing from land to land, add so much to the fascination of a rice country. My purpose has been to touch on only a single aspect of a vast subject. In conclusion, these few observations may be summarized by means of a comparison.

After a long absence from England I was travelling by train to Yorkshire. One of the things that struck me most forcibly about the countryside—especially when the tilt of the Pennines began to show the man-made surface pattern—was the lack of rhythm, and the fact that the enclosure boundaries were constantly jarring on my sense of harmony and design. A similar effect was produced by the disposition of buildings and plantations. The reason was not difficult to find. Only the very old buildings seemed to have been placed in any relation to the landscape; only the lines of the more humble and ancient roads, which took the line of least resistance, were attuned to the contours of the earth. Most of the more recent plannings



On the Izu Peninsula, south of Tokyo, the Japanese dry their rice on poles

—whether houses, field divisions, boundaries of woods, or even the placing of isolated trees—had been done with a minimum of reference to the physical features of the land. Rather, they reflected some system of ownership, the prices of building plots or mere accidents of caprice or circumstance. Broadly speaking, they were sociological and divorced from the essentials of nature.

Such considerations may provide us with a key to the harmony that inspires the landscape of such places as Central Sumatra and Bali. For there the artificial forms result from a long and uniform tradition of agriculture and have not been

subjected to the external and disrupting influences of economic and sociological change. There, too, we see men not simply forcing their purely human and often capricious will upon their surroundings, but working in concordance with them; not imposing their own pattern so much as weaving themselves into the pattern which is already there.

The Japanese, in their traditional approach to aesthetics, require that a work of art should reflect the character of its material. The results of that approach are analogous to a well-terraced rice land, which is one of the finest of all expressions of man's co-operation with nature.

The British Commonwealth

III. The Peoples of Asia

by F. BURTON LEACH

Last month Mr Graham Spry dealt with some of the European groups within the Commonwealth, emphasizing their variety and showing how they have adapted themselves to British administration. This month, Mr Burton Leach turns to Asia and the problems of government that arise in connection with the 424 million British subjects in India, Ceylon, Malaya and Burma. Next month, to finish the series, Miss Margaret Wrong will write about the people of Africa

IN thinking of the British Empire in the East we naturally think first of India, which forms over 90 per cent of the whole, both in area and population. After India come three countries of major importance: Ceylon, Malaya and Burma. The last until four years ago was a province of India, but now it is a separate unit of the British Commonwealth, and the third largest unit in population outside the mother-country, exceeded only by India and Nigeria. In addition to these there are outlying island territories, principally in Borneo; the two isolated colonies of Hongkong and Aden; the island of Cyprus, and the mandated territory of Palestine.

Altogether the Asiatic countries of the British Commonwealth have an area of about two million square miles and a population of over 400 million people. This is roughly a fifth of the human race, who are crowded into less than one twenty-fifth of the land area of the globe. China alone, of all the countries in the world, had a larger population than India, but the recently published total of this year's census figures makes it probable that India has now surpassed her.

India, Burma, Ceylon and Malay have many points in common. First, they all became part of the British Commonwealth in much the same way: by the entry of British traders whose object was trade, not conquest. What led them to become rulers of the hinterlands of their trading stations was the lack of orderly government, which made trade impossible, or wars between local kings and chiefs, who called on our more disciplined forces for help against rivals. Thus, with one or two exceptions such as, for instance,

the conquest of Sind, the British did not acquire territory in Asia by deliberately planned aggression.

Secondly, all these countries were at the time we entered them populated, not perhaps by as many people as they could have supported under a better economic system, but so fully as to leave little land available for settlement by new-comers. In this they differ fundamentally from the Dominions.

Thirdly, they all had a well-developed system of government, based on an old civilization. India, it is true, had seen as many wars as Europe, and throughout the centuries one civilization had been conquered and superseded by another, but the country had never reverted to barbarism such as existed in Europe during the Dark Ages. The Buddhist religion was born in India six centuries before Christ, and died out there under the resurgence of Brahmanism before Christianity was the general religion of Europe. Brahmanism or Hinduism, still the main religion of the country, is one of the oldest ethical systems in the world.

A fourth point of similarity between all these countries is the low standard of living by comparison with the countries of the West. One of the commonest lines of censure on the British Empire in India is to say that we have exploited the country and reduced the people to grinding poverty. Phrases like "the wealth of Ind" and "the gorgeous East", which have become part of our language, and the unsavoury epoch of the Nabobs of the 18th century, are quoted in support of such attacks. They find some corroboration in the records left by early European travellers who speak in



Paul Popper

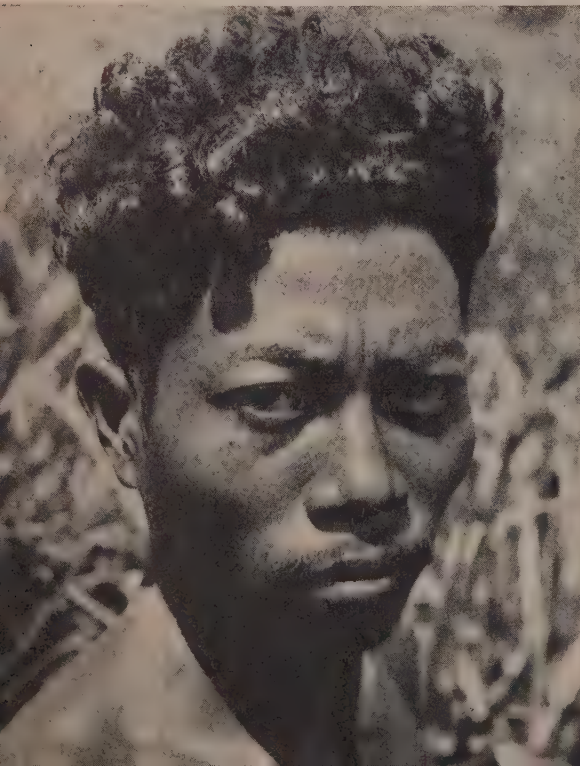
From the Punjab: a member of the Indian Army holds one end of his pagri (turban: anglicized, 'puggaree') in his mouth while winding the other end round the cap on his head. The method of binding indicates religion and status

terms of admiration of the glories of the capitals of the Moghul Emperors and their dependent rulers, and even of such minor cities as Kandy in Ceylon and Pegu in Burma. But this is only one side of the picture. Research into oriental history shows that these countries, like Europe, always contained extremes of wealth and poverty, the extremes being separated by an even wider gulf in Asia

than in Europe. The Court of the Emperor Akbar must have been far more splendid than that of his contemporary Queen Elizabeth, but the English peasant of the Tudor times was better fed, better clothed and better housed than the Indian peasant. The history of Western Europe includes nothing so dreadful as the recurrent famines that all through Indian history swept the country, leaving the



(Above) *An Indian Sadhu ('quiet man') whom the Hindus are enjoined by their religion to feed. (Below) From Malaya: a Sakai man, whose people are aboriginal nomads*



dead to be counted by tens and hundreds of thousands. Only a peasantry living at the best of times on the margin of subsistence could have been able to make so little provision against the lean years which come in every land and in every climate.

The great Indian cities, with their marble palaces and tombs, temples and mosques, seen in all the glory of tropical sunshine, were no doubt much more magnificent than medieval London, with its narrow streets under the grey skies of northern latitudes. For the Moghuls were town planners and artists, and their cities were in many cases better laid out, and were probably cleaner, since sanitation was not medieval Europe's strong point; but they were a façade, behind which lay countless villages of mud huts, huddled together for protection against wild animals and wild men, inhabited by a peasantry struggling, with even more primitive tools than their contemporaries in Europe, to wring out of the soil a meagre living. It is true that the industrial revolution of the 18th and 19th centuries, and the new methods of transport which made possible the import of cheap foodstuffs from the New World to feed the overcrowded countries of Europe, did not benefit India. In fact they did her harm rather than good, for the machine-made products of the West supplanted, even in India itself, the old products of her own skilled craftsmen. Her general standard of living therefore remained low. To raise it is a vital problem of the future.

Lastly, these four countries had known only autocratic systems of government. The systems were not all alike—a ruler might be anything from a petty chief to an Emperor—but they were essentially autocratic. Committees, it is true, existed in the Panchayats of the Indian village, but representative government in the European sense was never indigenous in the East; its modern symbol, the ballot-box, is an exotic plant, which has hardly yet had time to show whether it can or cannot take root in the new soil.

In spite of similarities in India, Burma, Ceylon and Malaya there are also differences, not only between the countries but within each of them.

In the first place, they contain a diversity of peoples and languages without parallel in any part of the world. India and Burma alone

have between two and three hundred different languages.

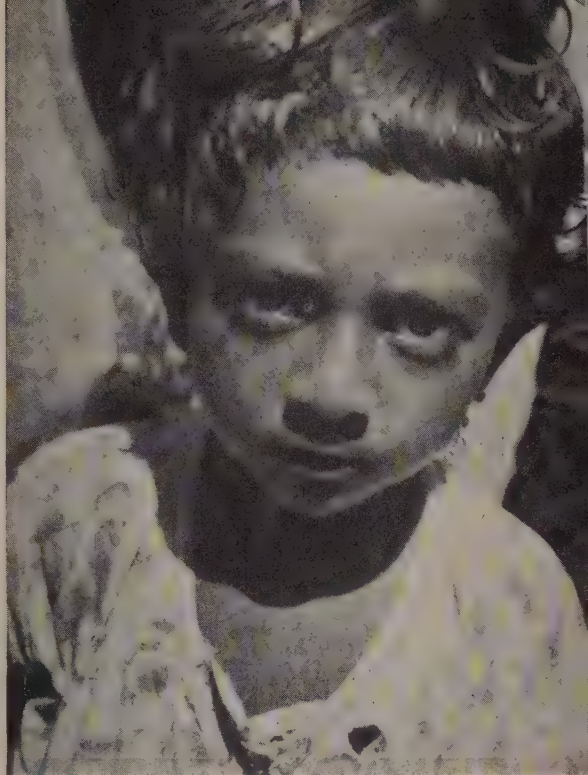
Who were the original inhabitants of any of these countries, we do not know. There are some very old groups left in southern India; there are others, perhaps older still, in southern Burma, Malaya and some of the Indonesian islands. It may be that the oldest of all, certainly the most untouched by later incursions, are the little Negrito Andamanese, who only a century ago were still in the Stone Age, and to this day never build a house or raise a crop. They wander through their tropical jungle, putting up little shelters of branches, living on wild fruits, fish, turtle and such birds and wild pig as they can shoot with bow and arrow.

From these, the most primitive people left on the face of the earth, the Indian Empire includes every variety of dark-skinned humanity in every stage of civilization up to some of the highest types of the Aryan-speaking races, such as the Rajput noble and the Brahmin with a hundred generations of culture behind them.

In the main the people of India are of two races: the Dravidian-speaking, dark-skinned people of the south, and the Aryan-speaking, fairer-skinned people of the north. Of the coming of the Aryans through the passes of the North-West Frontier we know something. Of the origin of the Dravidians, who presumably came earlier by the same route, we know nothing, but the survival of pre-Dravidian races show that they too must have been immigrants.

But these are not the only people. In the north-west there are, for instance, the Beluchi, of markedly Semitic type, and in the north-east, in Bengal and in the hills, there is a considerable Mongolian strain, of the same type as is found in Burma and Malaya.

Throughout the ages, the story of the four countries has been of a succession of waves from the north, each wave driving its predecessor farther south, where its energy was gradually sapped by the tropical climate, each to be in its turn overwhelmed by a later wave of men still strong with the vigour of the mountains from which they descended, to harry the fertile plains and finally to settle in them. It was inevitable that at each stage the conquerors should, to a greater or less extent, intermarry with the conquered, so that



(Above) From Ceylon: a little Sinhalese girl whose home is in Negombo. (Below) A man of the Santal tribe from Bengal—small, dark-skinned, semi-nomadic people



mixed peoples are as common in Asia as elsewhere. But two things have tended to preserve certain definite strains in India more than in most countries. The first is the caste system, whose origin may have been partly due to pride of descent in the Aryan-speaking conquerors, and the desire to avoid mixing their blood with that of the existing inhabitants of the Peninsula. The second is the fundamental cleavage between the Hindu civilization and the Muslim, to which the latest waves of invaders belonged. The Muslims had little objection to marrying the women of the country provided they adopted the new religion, but Hinduism is not a proselytizing faith, and some of its stricter adherents refused to have anything to do with the sacrilegious invaders.

In the second place, there is the cleavage of religion. Two-thirds of the people of India are Hindus, followers of that religion which to outsiders is the strangest mixture of the highest and lowest. Side by side with the Hindus live eighty million Muslims. The third great religion of these countries is Buddhism, whose founder rebelled against the formality and the caste tyranny of the Brahmins. For many centuries Buddhism was the prevailing religion of India, but the Brahmins recovered their power and drove it out and it is now, within the British Empire, confined to Burma and Ceylon.

Though, as I have said, Asiatic governments are of the autocratic type, there was, and still is, an infinite diversity in the forms of government.

India was never a single kingdom. When Europeans first reached it the Moghul Empire was at its height and went nearer to uniting India than any previous dynasty; but even this Empire was only the binding together of a number of feudatory kingdoms, control from the centre varying with the strength and personality of the Emperor. Such a system was bound to fall to pieces and it was already breaking up when the British trading settlements were formed.

India would, no doubt, have fallen back into a number of states of all sorts and sizes, from kingdoms as large as the Mahratta Confederacy or Hyderabad, to petty chieftainships of a few villages, isolated in swamp or desert or buried in the hillside forests.

Some of these States have been preserved and form the Indian States of today, whose internal affairs are administered by their hereditary rulers, under general control of the Viceroy. They contain nearly a quarter of the population of India. The remainder of the population is found in British India—the eleven directly administered Provinces. This dual system of government adds to the difficulty of framing a suitable constitution for all India. The Princes are jealous of their rights, guaranteed by treaty, and, though many reforms have been introduced into leading States, they do not see eye to eye with the advanced politicians who demand the complete independence of India.

Ceylon and Malaya were never united kingdoms; they were divided among a number of Princes or Rajahs, who were usually at war with one another. In Ceylon the Rajahs have all disappeared and the island is under direct administration. A new constitution has been in force for some years, with an elected legislature and ministers, certain powers being reserved to the Governor. In Malaya, except for the three settlements of Singapore, Penang and Malacca, the country is ruled indirectly through the Rajahs, some of whom are linked in a Federation. In Borneo, where the inhabitants are less advanced, is the well-known state of Sarawak, ruled by the only English Rajah, successor of the famous Rajah Brooke, who was given his kingdom by its native ruler nearly a hundred years ago. He is in practice an independent sovereign under British protection.

Burma was a united kingdom under a single king, with the Shan States ruled indirectly by feudatory princes. There are considerable minorities, but the great bulk of the people are of one religion and speak one language. The government was an autocracy, which fell through the inability of its rulers to use absolute power without excesses that brought them into conflict with their neighbours.

Such, in brief and necessarily incomplete form, are some of the main characteristics of this huge block of the earth's surface, which presents one of the most difficult and most interesting problems of the present day.

How are the principles of the new British Commonwealth of Nations to be applied to such a vast collection of peoples, of so many

different types, to all of whom democracy is a new idea?

In the first place, what has Britain done on the positive side for these countries? She has established law and order and given them freedom from internal strife for a longer period than they have ever known before. She has introduced material improvements such as roads and railways, posts and telegraphs, and irrigation to an extent that they would never have been able to achieve for themselves in the time. She has greatly lessened the terror of famine from which India at least was never secure. She has interfered as little as possible with religion and law and customs.

She has, more recently, devoted increasing attention to social services, public health, education, improvement of towns and villages, agriculture, new industries and the like.

That no mistakes have been made is not claimed. British rule in India at its inception was marred by gross corruption, but not to a greater extent than in Britain in that universally corrupt age; in the 19th century it was marred by commercial selfishness, but this again was equally apparent in the factory system in England. The main fault has been the impersonality and lack of imagination which beset all bureaucracies; British rule in fact has set too high a value on 'efficiency', has insisted too much that good government is better than self-government, and has been too unwilling to make experiments which involved a certain amount of risk. But for more than a century now it has been realized that the great task before Britain is to train the people of the countries within the Empire to rule themselves.

This is not an easy task, for they are at many different levels on the upward path. Some are heirs of an old and great civilization, some are primitive peoples who have reached no higher than a simple tribal organization. Progress in every instance must be suited to special needs and to the capacity for advance; it cannot be at the same pace for all, and paths may diverge in different directions to suit special characteristics.

The devastating experiences of the West in the last generation have opened all men's eyes to the evils of our material civilization, and to the worth of those spiritual things on which the East has always set a higher value. One of the things to be accomplished after the war will be the completion of our great task of fitting these countries, as soon as possible, not into a rigid system designed on a standard pattern, but, each according to its own needs, into the framework of a free Commonwealth of free nations.



Paul Popper

From Burma, where faces and features are often Tibetan

Corsican Holiday

by T. C. WORSLEY

THE invitation arrived in May, when we were staying between Nice and Cannes. Corsica suggested romantic scenery, scented airs, brigands, Napoleon. Anyhow our hostess, from whom the invitation had come, was an ultra-romanticist. "Porto", she wrote, "is the most beautiful place I have ever been to. I have been here a month and I never want to leave. The people were difficult at first, suspicious and aloof, but now I feel I am really one of them. Such dear little children. The hotel is kept by a Brigand. . . ."

My friend was sceptical of that brigand. He was also sceptical of the hotel: no less sceptical of the 'little children' and he frankly discredited our hostess's being 'one with' the people. But he had a passion for sightseeing and had never been to Corsica. We left on the 21st.

The steamer left Nice in the afternoon. Its destination was Ile Rousse, the nearest point

to Porto to which we could conveniently go.

The island appeared to the sight the next morning. It is quite true that with the wind blowing off the shore a sweet air of scented shrubs, cistus, lentisque and others less recognizable, meets the boat and laps it round for the last hour of its journey. The islands from which Ile Rousse takes its name pushed their stamens of red granite rock into the air.

Drawn up along the quay there were some twenty or thirty cars, large, middle-aged, American for the most part. We surveyed the drivers, trying to judge them from the point of view first of honesty and secondly of discretion. When we found one whose price sounded reasonable, he yet seemed surprised and gratified that we should have accepted it. He leant against the side of his Chevrolet in dirty cotton trousers and rubber-soled shoes, rolling a cigarette, while we fetched our baggage and put it in. He offered no assistance.

From Ile Rousse to Calvi is only twenty-one miles. But already by the time we reached it we had had a formidable foretaste of what the journey was to be like. Beyond Ile Rousse the road winds, following the coast along to Calvi. The natural twists of this coast road afforded our driver an opportunity for displaying the skill with which he had learnt to take corners without slackening speed. Compared with what was to come this road was a smooth, banked racing track. But already in the three-quarters of an hour which it takes to reach Calvi our nerves were frayed. We decided to stop for a drink.

The lower part of Calvi which flanks the shore is the modern resort. A large modern hotel stands in the centre of the lower road with lesser hotels beside it. We stopped in the higher, older part of the town in a café crowded with fishermen talking their rapid dialect between Italian and French. Would our offer of drinks establish some claim to



(Opposite) *The little port of Bonifacio—a town without trees—which overlooks the straits between Corsica and Sardinia*

(Toni Muir)

Stanford, London







Paul Popper

(Above) *Olive trees, grottoes and deep still pools punctuate the Corsican scene*
 (Opposite) *Paglia Orba, at 8290 feet the third highest peak in Corsica*

consideration from our driver, on the strength of which we could persuade him to travel at a slower, safer speed? Or would the drink, loosening his control, inspire him to new variations of reckless audacity? One drink, or two perhaps, we decided would avoid the latter danger and make the former contingency possible.

But the matter was soon out of our hands. Our two *pastis*, a stronger kind of *Pernod*, were each swallowed at a draught. The driver was evidently well-liked. He was in the money too, and was soon the centre of a convivial circle, *pastis* following *pastis*. Forgotten in a corner of the café, we sipped our drinks, anxiously counting the score in the convivial centre, nervously noticing the mounting hilarity, the sharp edge of excitement which absinthe gave to their laughs, their backslaps, their sharp disdainful gestures.

After an interminable wait the driver called over to us indicating that it was time to go. As we went out he turned to have the last word with a bus-driver who was one of the group. As we got back into the car and settled into our seats, he explained the altercation. The bus-drivers, he said, had orders now that they had rights of way on every occasion.

It was an ominous beginning to the resumption of our drive. But it set the tone. I prefer not to remember much of that drive; it seemed endless, like a term at school which no device of crossing off dates or adding up the hours is able to decrease. But like a term at school, it eventually ended, at half-past ten at night, by a little bridge. It was pitch dark. Our hostess was in bed. Our late arrival was unpopular. We didn't bother about anything but getting up the

narrow stairs into our bedroom, which looked by candlelight whitewashed and rustic, and falling asleep.

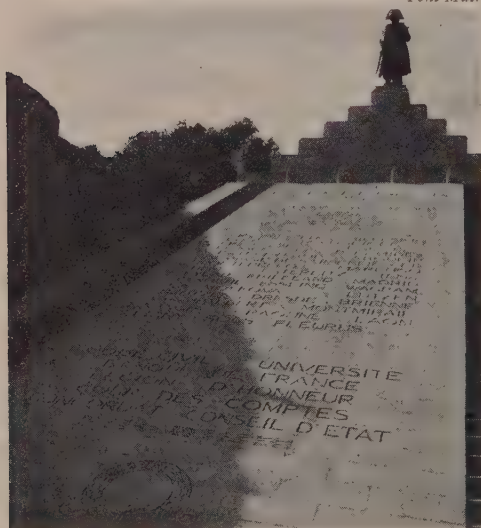
A passage led onto the roof terrace from which I could get my first considered view of



Toni Muir

The modest Louis XVI house at Ajaccio in which Napoleon, 'the Corsican', was born. It is kept as his family left it and the trap-door through which he escaped in 1793 is shown. Below is the monument to him, also at Ajaccio, only recently unveiled

Toni Muir



Corsica. The inn in which we were was just beyond the bridge crossing a stream that dashed down the valley past the windows, making, as it fell from pool to pool between the jagged rocks, a never-ceasing murmur which became itself a part of the silence, like the throb of a machine, unvarying and perpetual. The valley was steep, rising abruptly beyond the stream and behind the inn to towering hills which made the sun set and rise an hour earlier or later. It was scenery on the grand romantic scale, the sort of thing which as a steel engraving illustrates an early edition of Byron.

The days which followed passed in the most agreeable way imaginable. It was a twenty-minute walk to the sea through a cool and watered wood. The sun was blazingly hot. The beach, quite deserted except for ourselves, was sandy under foot. It shelved steeply enough to create aggressive rollers, on the crests of which you could fling yourself and surf-ride in to the shallows in a splutter and flurry of spume. The water was sparklingly cold, but three minutes in the sun was enough to bake you for your next entry. The perfection of bathing conditions—and, as well, flat and graded rocks below the cliffs, smooth and shaded for reading or writing and for spreading out luncheon and balancing the wine bottles.

Beyond the expeditions to the beach we did not go very far afield. It was too hot for that. But the walk up the side of the stream was cool and exciting with that excitement one could recapture from childhood—crossing the stream by jumping from stone to stone, or pushing one's way through the tangled undergrowth, or wading, with the rapid stream climbing up our legs, where the bushes were too thick to penetrate. The stream's edge, like the beach and the rocks, were not un-English in their feel, resembling the most attractive features of English landscape carried one stage further towards perfection, and with an absolute certainty of sunshine. Only, you felt the absence of grass. Not a blade. A kind of stubbled moss provides the *ersatz* material, deceiving the eye at a distance but disappointing the nearer approach.

Every few hundred yards the stream was checked by a piled heap of rocks: it became a

series of rapids, and beneath each set of rapids it formed into a deep pool. These pools were of a clarity which I have never seen before. Five, six or seven feet deep they were, as still as silence and as clear as polished lenses. The sunlight, penetrating them, lit up the coloured stones which lay at the bottom as though they were sets behind dazzling footlights. At first you put in your hand deceived into imagining the stones were within arm's length. But your hand was nowhere near them.

Another walk was up the hill opposite our inn, where half-way, terraced out of the steep side, there was a small-holding. It belonged to an Italian refugee and his wife—there were a number of such on the island. They lived in what must be one of the most curious houses in the 'civilized' world—it was

a house inside a stone. Entering it, one might imagine oneself to be in a Disney film in which a mussel shell had become a house. The peasant and his wife had, too, something of the quality of Disney characters, the reckless gaiety and generosity of those who have nothing. They wrung a wretched, spare living from their stony terraces; but they preferred any hardship, they told us, to living under Mussolini.

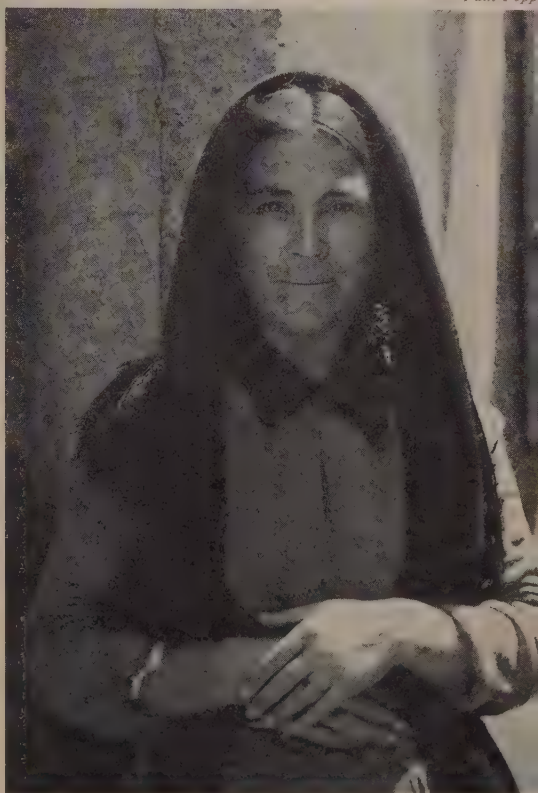
This was the most successful of the contacts which our hostess had made before our arrival. With the villagers themselves and the curious nomad population which lived in the inn, the Brigand and his wife and various odd bus-drivers and lorry-drivers who came and went, she was surprised to find that after our arrival she ceased to have any contact. Before we came, she said, she had,

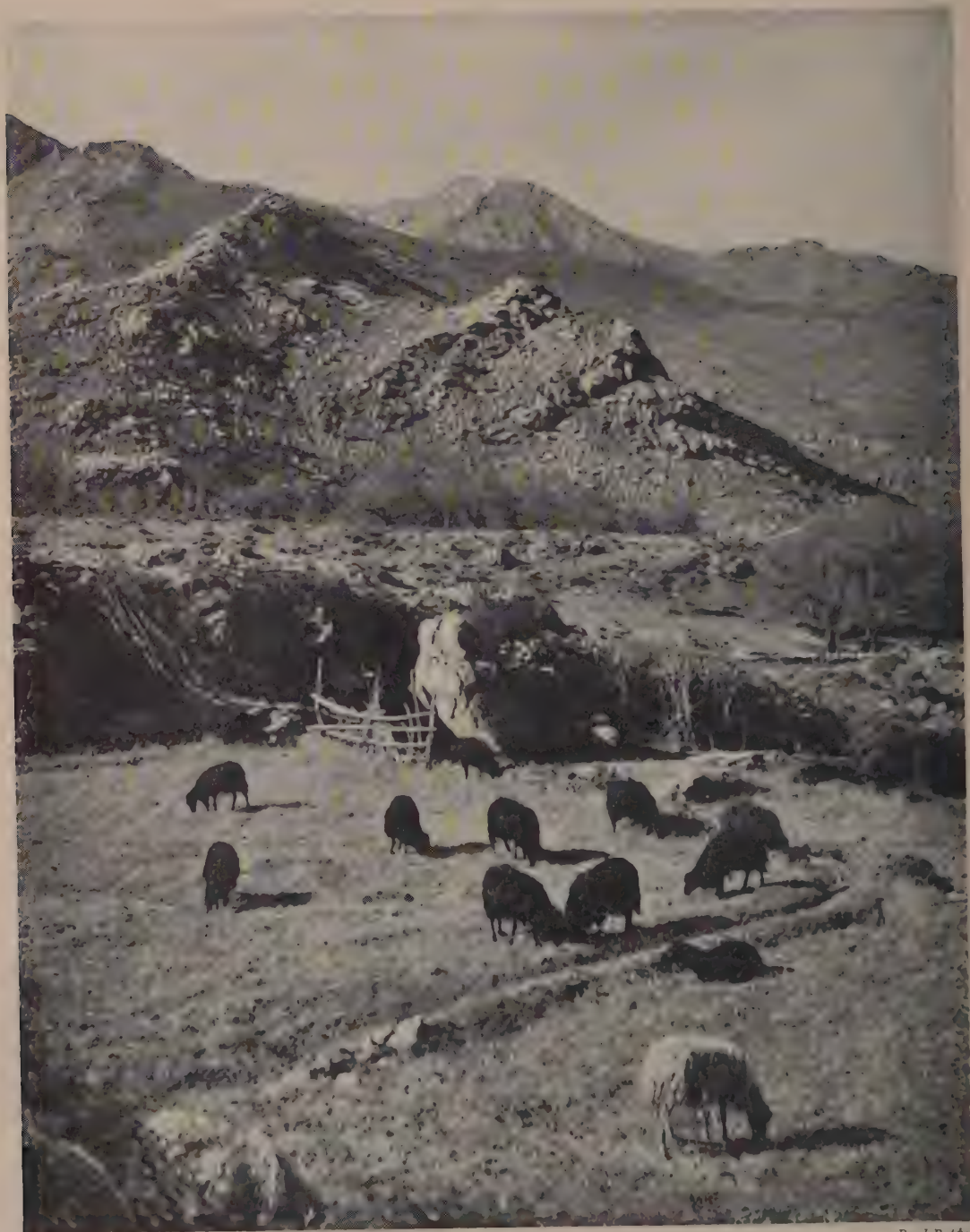
Ajaccio streets are playgrounds for children who pay less heed to the photographer than do their elders

Paul Popper



Paul Popper





Paul Popper

Barren land provides scant grazing just below the snow line in the heart of the Cinto Mountains

after the first suspicious aloofness was over, established much the same relationship as with the Italians. But where the Italians had welcomed us as friends of hers, the Corsicans now re-included her in the vague hostility with which they treated us. The Corsicans, in our experience at least, dislike the tourists.

It was this hostility which, in the end, persuaded our hostess to move on. Ordinarily she disliked sightseeing. You see a place much more *really*, she insisted, by staying in one district and getting the feel of that, than by trailing round like a movie-camera. My friend had disagreed violently; it had almost amounted to a quarrel. But now, though still reluctant, she agreed to move down the coast to Piana.

The hotel at Piana was altogether different. It was 'modern': running water, clean, long passages, servants, shoes placed outside doors. Every other day a bus which was doing a round tour of the island emptied into it a load of chattering tourists from a cruising liner.

All the same there was a new Corsican flavour for us in Piana. The village was two or three miles from the sea and the hotel was built on the top of the cliffs. It was a long winding precipitous path down the cliff-side to reach a charming cove. We were advised to hire donkeys. We went into the village to three different addresses where we were told we might get them. In each case there were donkeys standing tethered and idle outside the houses. In each case we were refused. The owners couldn't be bothered to make the journey. Not, as we discovered, that they had anything else to do. Hiring donkeys was their livelihood. But just now they didn't happen to feel like working, and nothing, not even bribes, would make them. They were extremely rude but rather pleasantly incorruptible.

In fact it was not so far to walk—down. This beach too was pleasant. The only other occupants were a party of fishermen with their women. There were seven or eight of them with several pretty children. From our first appearance they from their side of the cove began jeering and laughing at us on our side. It was fairly good-natured but they made it clear that they thought us laughable, if not contemptible. One would point at us or indicate us with a gesture and

say something: the rest would laugh immoderately loudly and add jeers to whatever the first had said.

It was surprising, then, but typical, that presently one of the children came over to us and slightly mockingly offered us—a whole lobster ready for eating. They were making their lunch off lobsters while we had been picking at the sandwiches with which the hotel had supplied us. We called over our thanks. They laughed back. We thoroughly enjoyed the lobster.

After lunch we went over to thank them and offer cigarettes, which was all we could think of as a gesture of gratitude. They dropped their jeering—though the ringleader continued faintly ironical throughout—and were as friendly as could be. All the summer they lived in the most squalid tents high up the beach, and put out with their two longish boats to drag for lobsters and langoustes. In the winter they moved back into the village. The children, we noticed, were not very healthy, addicted to sores on their lips and necks. The woman complained of an abscess in her ear. But their friendliness above the irony was natural and spontaneous. They insisted on giving us another lobster. And when it was evening they indicated two donkeys which one of the men was taking up to the village, and offered them to us to ride.

Yet Piana wasn't quite a success. We were missing something between two conceptions. Living at the large modern hotel we could hardly attempt a pretence of getting the atmosphere of the place; we felt ourselves to be nothing but transitory tourists: the villagers by their stares convicted us as such. Yet, equally, the conception of camera-eyed tourists was undermined. The whole weight of our hostess's reluctance was against it. After two days we moved on by a bus which took us through the middle of the woods to Ajaccio.

A largish town—a moderate seaport—the most insistent feature of Ajaccio was its smell. The dryness and the heat covered it with a white powder of dust which overlaid the palm trees in the main boulevards; and this same heat and absence of rain—for there seemed to be no other method of cleaning the town—were responsible for the smell: the smell of ill-managed drains. The town struck one as



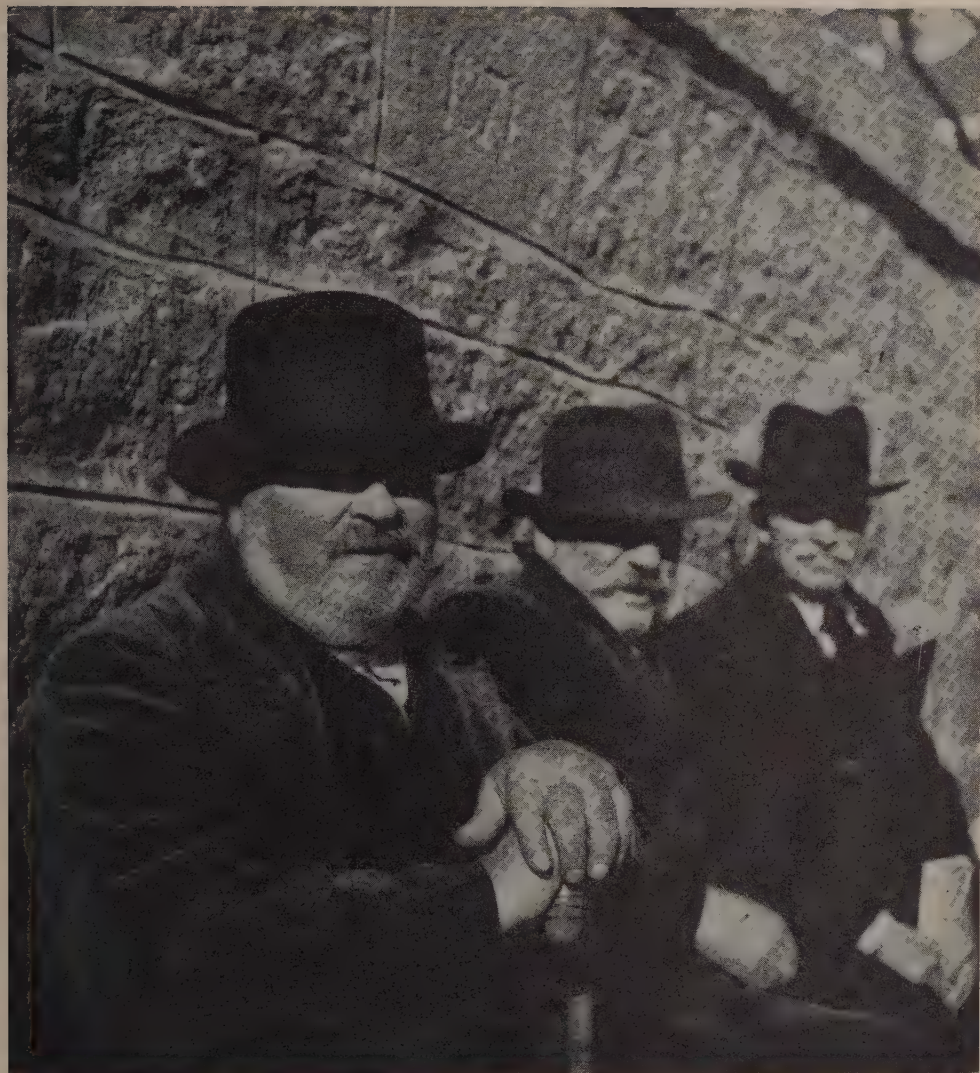
Toni Muir

In Sartene—small, high-lying, affording a fine view of the island—vendettas are still common

poor, the people shabby, the children in torn clothes, the stucco on the houses peeling. But the poverty seemed to rise from nothing more dramatic than a slow decline, as if the town had been struck by an infection of decay, which took the spirit out of everyone and everything—the large Casino with its glittering Edwardian chandeliers was empty, inhabited by only the echoes of a departed crowd. The figures in the cafés were listless, the accordions nostalgic, the waiters seedy,

the young couples arm-in-arm but defeated.

It defeated us too. There was a boat crossing to France in forty-eight hours' time. My friend made a desperate effort. Our hostess refused to come but we made the visit to Napoleon's birth-house. A modest Louis XVI house, it had something of the odour of a Scottish manse translated into French terms. We were guided round. The high chair, the bed, the writing table at which . . . It was reassuring, comfortably, amiably



Toni Muir

But the islanders are good-humoured, and—like all sensible people—enjoy their place in the sun

bourgeois, but giving no clue to whatever arrangement of genes dictated the strategic gift, the rise to power, the destructive impulse to dominate. But it recorded an Ajaccio which once lived and thrived on its present, and which anticipated a future.

The last day we drove out past the town cemetery. Every kind of decoration, ornate, ostentatious, baroque, palladian, but many more vulgarly mixed, stretched themselves along two miles of the coast. We rattled

along in a fiacre enjoying the dated rhythm of the trotting horses. A pleasant expedition which revived, but only for a moment, all our enthusiasm.

But at least we had a real taste of Corsica. The word suggests to me now something more than romantic scenery, scented airs, brigands, Napoleon—or rather each of these things, which may be the essence of the island, was defined into individual pictures and scenes with a sharper focus.

From Field to Factory

by R. QUARENDON, PH.D., B.Sc.

The word ersatz (substitute) has been much used in connection with Germany's lack of raw materials. But not only in Germany are agricultural products turned to industrial uses: such metamorphoses are now successfully exploited in many other parts of the world and, as Dr Quarendon explains, make ever more important the coalition of farmers and industrialists

It would be wrong to look upon the farmer and the manufacturer as playing-independent and unconnected parts in world economy. The earth has provided raw materials for industry from time immemorial. Wool has been spun, leather tanned and timber worked for thousands of years; but we are beginning to look upon farm products as raw materials in a new way; as something for the chemist to work on.

As Mr Churchill pointed out, in defending the Government's decision not to send food to occupied countries, some of the most valuable foods are essential to the manufacture of vital war materials. Guns and butter are literal, not merely figurative, alternatives.

The farmer largely controls the commercial pulse of the world. Food production, with its packing, distribution, selling and all the accompanying services, by far the biggest combined industry in the world, means a demand for manufactured goods. If that demand fails, as it eventually does when surpluses pile up and prices fall, then the vicious cycle of unemployment begins to operate.

Despite increasing mechanization, the land still employs more people than any other single occupation. Not only does the value of farm produce exceed that of any other class of merchandise, but farming contributes one-third of the value of the raw materials consumed by industry.

Raw materials flowing from field to factory amount to some £2000 millions per year.

The bulk of this contribution consists of the well-established outlets such as cotton and wool for textiles, rubber, timber and oils. What agriculture asks itself is: can this large figure be substantially increased?

The pessimists say that, a century ago,

eighty per cent of the products used by man came from the farm, and point to the reduced proportion in recent times. We must admit that the sensational developments in synthetic materials made exclusively from minerals and from the air in recent years offer a challenge to the farmer. The reduced percentage does not mean that the use of farm-produced materials is declining, but only that we have tapped new mineral resources and expanded others during the last hundred years.

THE BEAN WITH 100 USES

Much of the research directed to finding new outlets for farm produce is being carried out in America, where farming plays an especially important part in the economic structure of the country. World prosperity and employment probably depend more than anything else upon maintaining a nice balance between the production and utilization of farm products.

The soya bean provides a notable example of a new old crop now grown largely for its value as an industrial raw material. The staple crop of Manchukuo, its original home, where for 5000 years it has been grown for its food value, has come to the fore in industry only during the last decade or so.

A striking combination of properties has sent up the soya bean output from eight to eighty million bushels in America during the last ten years. It has a remarkable adaptability to different soils and climates, perhaps greater than any other plant. Prolonged lack of water brings no serious consequences, nor do insects attack it to any marked extent. Another fortunate thing is that the soya bean lends itself to mechanical cultivation. The use of the rotary hoe and the combine harvester both speed up production and cut down costs.



South African Railways and Harbours

(Above) *A South African citrus grove.* (Below) *Clusters of grape fruit in the East Transvaal.*
Such fruits can be used in making valuable solvents for paint manufacture

South African Railways and Harbours



Research work carried on steadily year after year has evolved new strains which give not only more seed but more oil and other valuable constituents. Yield per acre has been almost doubled through the improvement of varieties and methods of cultivation. The large sums spent on research in the laboratory established specially for developing and improving this versatile bean have provided handsome profits and benefited both agriculture and industry. Admitted to trading by the Chicago Board of Trade only a little more than four years ago, the soya bean by March 1939 had become the highest-priced commodity sold. The U.S. Department of Agriculture expects a continued expansion during the next few years.

The Far East still grows ninety per cent of the world output of thirteen million tons of

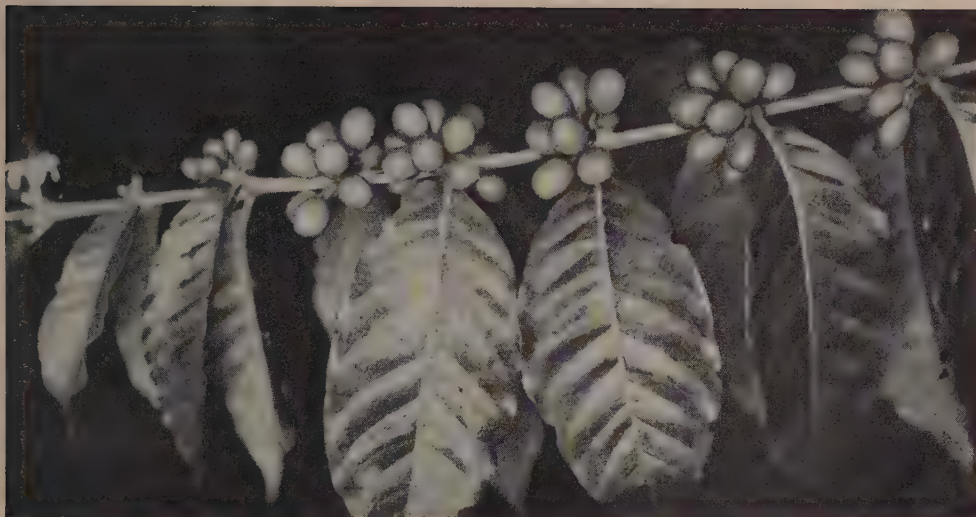
soya beans, but each year sees new areas of expansion elsewhere. Some years ago South Africa imported 500 varieties to find one which did not scatter its seed. When it had been found, the problem arose of how to retain this property in succeeding generations. Scores of crossings with other varieties and continued re-selection on scientific lines ultimately produced a hundred true-breeding hybrids adapted to different localities and purposes, which have now been made available for large-scale production. Vigorous experimental work at several places in this country has so far not produced a variety with a yield of beans large enough to justify development here.

The factories separate the oil from the bean by crushing or by extraction with solvents. Apart from its wide use in foods, including



Fox Photos

The soya bean: an example of a crop now grown largely for its value as an industrial raw material



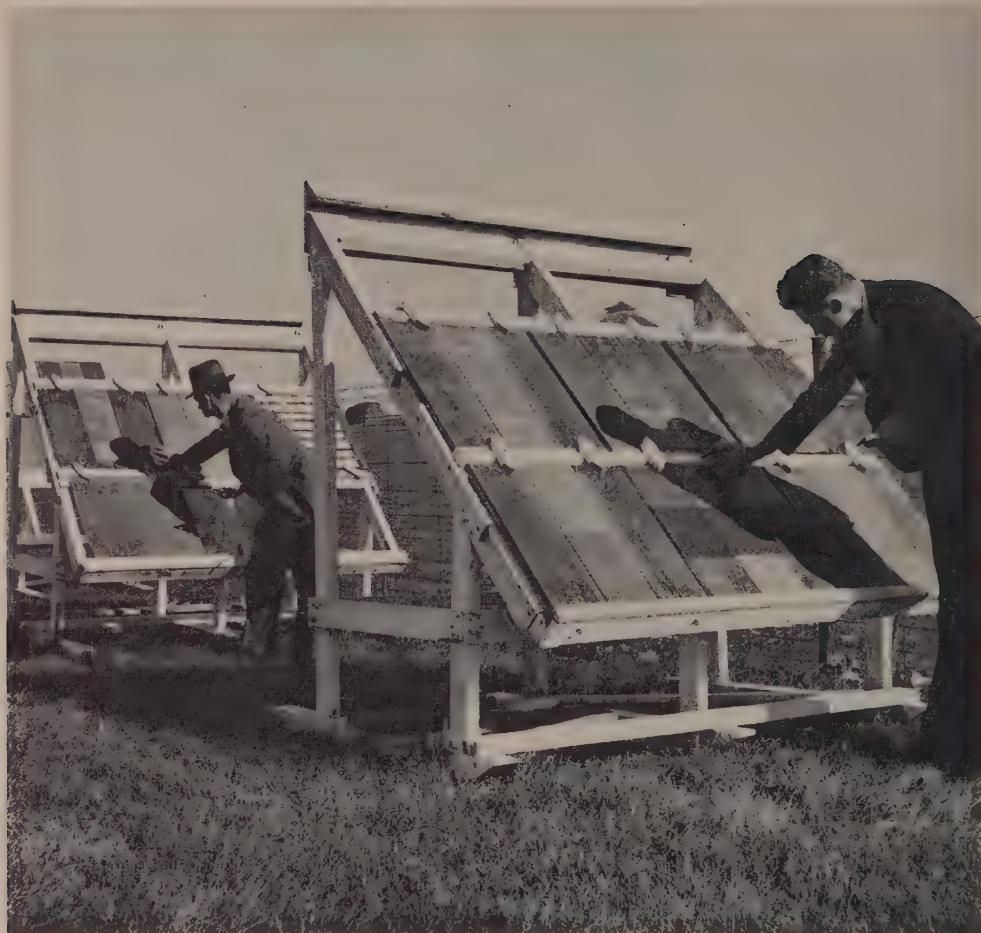
Imperial Institute

Coffee berries. In Brazil, factories are going up for making the new plastic, 'cafelite', from surplus coffee



Bureau of Agricultural Chemistry and Engineering

Cultivating soya beans with high speed machines that skim under the surface and clip off the weeds



Bureau of Agricultural Chemistry and Engineering

The soya bean has been described as 'versatile'. Paints and varnishes are among the substances to which it contributes: testing samples made with soya bean oil

margarine and cooking fats, its chief outlets at present are in paint and varnishes, soap, linoleum and oilcloth. Paint manufacturers prize soya bean oil and the materials which can be obtained from it in finishes for cars because it stands up better to baking in the ovens and is cheaper. For white or light-coloured finishes it has replaced linseed oil to a considerable extent. Manufacturers of oil extraction plant can hardly keep pace with the increasing demand.

Soya bean and linseed oils also find themselves rivals for liquid and paste soaps, for cleaning motor-car bodies and other metals, with soya bean oil now taking the lead. This

oil has its own characteristics which make it useful, so it is not entirely a question of replacing one agricultural product by another, a state of affairs which the chemurgist is always anxious to avoid.

Few crops can be used with less waste than the soya—indeed it is that rare thing nowadays, the crop without a surplus. A ton of beans, after extraction of the thirty gallons of oil, leaves 1600 pounds of meal which promise to be as valuable as the oil.

Soya meal is also used for paper, syrups, adhesives, laminated fibre board and water paint. The knobs, 'cubby-hole' covers and other fittings which give a sleek appearance

to a low-priced car are made of moulded plastic material containing soya bean meal. Most plastics contain sawdust merely as a filler, but soya meal contributes to the strength of the finished article.

Another item may soon be added to the soya bean's credit sheet—car upholstery of artificial wool. For years scientists all over the world have tried to find an artificial textile which will have the warmth, feel and strength of wool, especially when the garment is damp.

Soya meal has an unusually high content of protein, the basis of all attempts to make artificial wool. By very strict control of the bean variety, and careful cultivation in soil of the right type to ensure uniformity, and by the proper chemical treatment of the bean, technicians have succeeded in producing a fibre with the closest resemblance to real wool yet achieved. It blends well with wool and cotton and can be worked up on standard machinery to give a fabric which may eventually make us independent of the sheep.

MOTOR CARS ENRICH FARMERS

Speaking of cars, farmers perhaps do not realize how much the motor car puts into their pockets. It was calculated a year or two ago that every million cars used three million pounds of wool from 800,000 sheep; 350,000 pounds of mohair from 87,500 goats; nearly 90 million pounds of cotton from 558,000 acres, and $2\frac{1}{2}$ million pounds of linseed oil from 17,500 acres of flax.

In addition, the same cars required alcohol, starch and rubber substitutes from 11,280 acres of corn; lard, fat and bristles from 20,000 hogs; $1\frac{1}{2}$ million square feet of leather from 30,000 cattle; solvents, anti-freeze and shock-absorber fluids from 12,500 acres of sugar; well over 100 million feet of lumber for crates, 5 million feet of paper board and 2 million pounds of turpentine from more than 20,500 acres of timber; nearly 70 million pounds of rubber, and 2 million pounds of soya bean oil. If present efforts to use plastic materials for car bodies succeed, then we may look upon the motor car almost as something which grows from seed!

ALCOHOL FOR MOTOR FUEL

Any really important benefit to agriculture must spring from a large-scale demand for its

products. Already concerned with outputs of foodstuffs amounting to millions of tons a year, the farmer must find new markets and outlets on a similar scale if they are to be worth while. Small markets must not be despised; but such comparatively minor uses as gum and glues, polishes and creams, pharmaceuticals and paint thinners will not greatly swell the farmer's bank balance.

Probably the biggest potential demand which could be satisfied by the farmer if economic conditions were favourable is the demand for motor spirit. Ever since the motor car became important, chemists, biologists and economists have experimented, written and disputed about the possibilities of power alcohol as a motor spirit. As any housewife making her own wine knows, alcohol can be produced by the fermentation of numerous crops, including potatoes and beetroot; cane sugar molasses; wheat, maize and all cereal crops; and apples and pears.

Although such a variety of crops can be used, the yield of alcohol per ton, and especially per acre, differs greatly. Cereals give the biggest amount per ton—80 to 85 gallons—but sugar beet, sugar cane and potatoes yield very much better on an acreage basis (180-290 gallons per acre). Most of the world's power alcohol output of some half a million tons a year comes from potatoes, beetroot, maize and blackstrap molasses. Germany until recently devoted 5 per cent of her potato harvest to the production of power alcohol, but, as our blockade tightens, she now wants these potatoes for stoking the human instead of the car engine.

Alcohol is an acceptable fuel; the modern car engine runs quite happily on a mixture of petrol with 10 per cent alcohol. A much larger proportion of alcohol would mean alterations in design. It is chiefly on the hard fact of high production costs that the advocate of power alcohol stubs his toe.

If only a moderate amount of alcohol is produced, using molasses, or surplus corn and potatoes, or wastes such as cornstalks and hulls; or while the farmer contents himself with a very small return on his crop, then alcohol will here and there be cheap enough to find a place in the motorist's tank.

Replacing a large proportion of motor spirit by alcohol is a horse of an entirely

different colour; it would mean giving over one-third the acreage we devote at present to food, or adding an equivalent area to the land under the plough. The rise in the price of motor spirit would hit the farmer as hard as anyone else.

No, the growth of the power alcohol industry will be a gradual adjustment to changing conditions rather than a spectacular leap to prominence. Wastes and surpluses will first of all be utilized, followed by regular crops in districts where conditions most favour the use of alcohol spirit.

MILLIONS FROM MILK

After the soya bean and alcohol, milk promises to have the biggest possibilities in the farm-factory coalition. It receives intensive study in the research laboratories of several countries, while it has already given birth to two industries of major importance—the manufacture of casein plastics and of artificial wool. Again we have a raw material which offers plenty of scope because of the enormous quantities available.

Milk and milk products top the list of the world's agricultural produce. Chemists hope to divert from the pig trough to the factory some of the enormous quantities of buttermilk left from the production of butter and cheese. Numerous interesting uses have already come to light and others are being investigated. America's contribution alone amounts to 5000 million gallons; Norway, Sweden, Holland, Denmark and other countries, which in normal times lived largely by their dairy industries, disposed of more oceans of buttermilk and whey.

Casein plastics, so called because they can be moulded under heat and pressure, appear in a legion of attractive and useful forms, such as brush and mirror backs, hat ornaments, knobs, keys and handles, and knitting needles, to name only a few. If you buy a set of 'horn' buttons or a 'horn' buckle, you may bet even money that it came not from the head of a buffalo, but from the inside of a cow. Newer types of plastic material coming on the market within the last ten years have not ousted this product of the farm.

Every housewife, when she makes Devonshire junket by adding rennet to milk, has

performed the first step in the production of casein plastic, except that the commercial article contains no butter fat. She can therefore confirm that the coagulation of the 'junket' calls for a rather nice judgment. The remaining steps are simple enough; they consist of beating the casein with water, then pressing and washing it, followed by very careful drying.

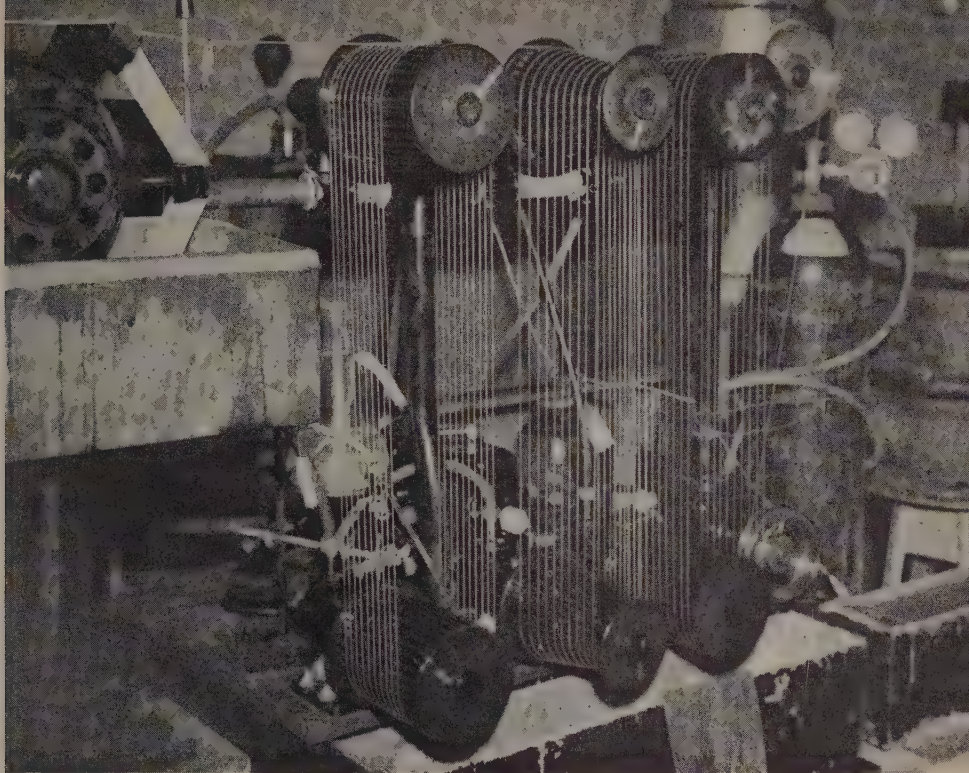
From these operations a whitish powder results which heating and squeezing through nozzles transforms into soft rubber-like flexible rods that require hardening in a special bath. The hardening may take months. A machine cuts the rods into the button blanks which can then be moulded or cut in all sorts of cunning shapes.

All this from what was once a waste material, but one which Germany and Italy cannot now obtain in sufficient quantities! It was an Italian chemist, Feretti, who found a way of making milk wool after German chemists had failed. It came to be known as 'Sanctionist wool', because Italy first made it on a commercial scale five years ago, when sanctions applied by the League of Nations cut down supplies of natural wool.

Italy's production of milk wool increased rapidly after the first small-scale unit began operations in 1936. A Dutch concern has since developed a process of its own which is simpler to operate. They call their product 'Lactofil'.

From Italy the production has spread to many other countries. Lancashire weavers use it in admixture with wool for dress materials. Every class of fabric, from the flimsiest nightgown to the heaviest overcoat, can be made from it. It is estimated that the amount of milk wool obtainable from skim milk now thrown away would equal the world's present rayon output, which in turn has been calculated to be sufficient to supply each person in the world with a garment requiring three yards every year.

Although, being smooth, milk wool does not feel like natural wool and therefore tends to strike cold if it becomes wet, it resembles wool in several important features; it does not crease easily, and can be dyed with the same dyes as sheep wool. One type has the characteristic fine kink of natural wool,



Ford Motor Co. Ltd.

(Above) Spinning artificial wool from soya bean protein. (Below) Spraying the body of a car with paint made from soya bean oil



Ford Motor Co. Ltd.

shrinks less and does not irritate sensitive skins.

Chemists of the U.S. Bureau of Dairy Research have found several new uses for the lactose of whey. One of the most interesting is the manufacture of transparent rubber.

USING SURPLUS CROPS

Intensive methods of cultivation, making two blades grow where one grew before, have brought to many countries the problem of over-abundance. Canada alone has sufficient surplus stocks of wheat to supply the world for fourteen months. The Argentine has huge quantities of maize. Cotton stocks, piling up at an increasing rate, have reached 250,000 tons in the U.S. alone.

The burning of over three million tons of coffee during the last ten years, resulting in a total loss of half a million dollars, roused the Brazilian Government to find a way of utilizing some of this enormous surplus. American scientists working on this problem with South American funds perfected a process for making the latest triumph on the chemurgic field, the new plastic material, 'Cafelite'. It will be the cheapest plastic material on the market shortly when the factory begins operations. One bag of coffee is enough to make 40 square feet of plastic material half an inch thick. It will also be used for flooring, millboard, furniture and radio cabinets as well as for moulding small articles such as cups, tooth-brushes and pencil-holders.

Selective breeding produced the long-fibred tufts of the cottonseed most suited for cotton textiles. Now that the world has too much cotton, a 'bald-headed' cotton whose balls contain all seeds and no fibre has been perfected. Cottonseed oil is one of the most important oils for soap-making. Experiments during recent years show that cotton fabric reinforcement lengthens the life of roads.

Farming wastes present a big opportunity. From one to two and a half tons of straw, stalks and husks, almost all thrown away, accompany every ton of grain. Hundreds of

millions of tons of these wastes and cotton stalks and hulls are burned every year. Some of it goes into strawboard, but the biggest part is still available for someone with ideas. The Quaker Oats Company turn their oat hulls into a chemical called 'furfural', largely used in purifying lubricating oil and of great potential value in dyes, paints and plastics. Recent work suggests that cotton hulls may be more economical.

Before the war we imported 60,000 tons of potato starch a year from Poland and Holland. Our own potato surplus of half a million tons a year could be used to supply this deficiency.

Fruit surpluses are a cause of headache to many governments. Vast quantities of oranges and apples not quite up to table standard because of shape, size or colour, at present wasted, await disposal. In California they use the surplus oranges for making citric acid and citrous oils. In Palestine a process has been worked out for the manufacture of valuable solvents for the paint, varnish and artificial leather trade from surplus Jaffa oranges. Chile plans to use her annual surplus of half a million bushels of apples for the manufacture of chemicals.

I have mentioned some of the more important ways in which the farmer serves the industrialist. There are many more—in fact, a list published last year contains 400 non-food uses for farm products.

A factory recently began making from maize a protein called 'Zein', valuable as a size, and for printing and paper manufacture. Hitler was recently presented by an admirer with a box of paper made from apple stalks; wool substitute is made from potato leaves. Japanese scientists use sweet potatoes to make butanol, a starting point in the manufacture of synthetic rubber. Schoolboys will rejoice to hear that the castor bean is being cultivated for paint manufacture. An Indian scientist claims to make petrol from the rampant hyacinth weed. Thus, from every corner of the globe the feet of hundreds of research workers beat into an ever firmer and wider highway the path from field to factory.



by ST. JOHN CHADWICK

As the war has moved towards the Middle East, public interest has been focussed on the oil-producing countries of the Muslim world. Of these, Iran is perhaps the most important, both for the extent of her resources and her strategic position between Turkey, Russia, and our Indian Empire. In common with her neighbours, Iran, the ancient Persian Kingdom of Darius, has in recent years shown a rapid advance in national self-consciousness and the peaceful absorption of Western culture and technique. The purpose of this article is to show how far along the road westwards she has already travelled

IRAN is among those rare countries, rapidly diminishing in number, which are still, one feels when visiting them, totally unsophisticated and unspoilt. Here are towns where one may sleep or dine in comfort, and yet be surrounded by the atmosphere of a culture as old as history itself: Tehran, with its modern hotels, broad avenues and spacious sidewalks; Isfahan, of which the Persians wrote: "This is half the world"; Shiraz, with its royal gardens and the still-clinging glory of Firdausi's roses.

The dominant features of the Iranian landscape are two mountain ranges: one towering over and guarding the approaches from the west; the other, the volcanic Elburz,

running from east to west along the northern frontiers of the country; to these should be added the harsh mountainous land north and east of Bushire on the Persian Gulf. Behind the first, the western wall, and protected by it, stretches the great Iranian plateau; from Ecbatana to the nearer reaches of Baluchistan and to the foothills of the Himalayan ranges roll mile on mile of boulder-strewn, wind-swept desert; carpeted in spring by unending acres of bright flowers and shrubs which shrink under the summer sun to dust and shrivelled leaves, and relieved now and again by smaller ranges; at other times lapsing into sheer sandy waste, such as the well-named 'Valley of the Shadow of Death', which lies



Stanford, London

athwart the road southwards from Tehran to the holy city of Kum, with its gold-domed mosque and parched scorpion-infested river-bed.

Coming into the country as I did, from the Baghdad rail-head, you plough laboriously across the old caravan trail—one of the oldest in history—along which fled the relics of a mighty massacre, when Genghiz Khan, sweeping westwards across the widening plains, destroyed the great city of Rey.

The trail beats on across monotonous country, unrelieved save by an occasional cluster of mud huts camouflaged against the mud-coloured desert; and as you jolt through in a cloud of dust, dogs bark furiously and bring the dead village to life: strange, uninquisitive faces look down from the roofs of flat-topped houses and fair-faced, pot-bellied children dressed in gay rags and tatters wave an energetic greeting. As Baghdad, with its jangling camel convoys, falls behind, the scenery gradually changes: the pebbly desert turns to sand, and the flat land to sun-scorched sand-dunes out of which the track twists and climbs and falls again round hair-pin bends, through deep ruts and gorges.

Into this desolation I followed the solitary telegraph wire which had been my companion since Baghdad; perched upon it were scores of raucous, multicoloured birds, but for whom I might have been a traveller on a lifeless planet. All around stretched the dunes, twisting themselves into eerie shapes, so that no sooner was I at the top of one hillock than I was confronted by another vista of unending sand. I remember feeling as lonely as when going down to bathe at low tide at Weston-super-Mare!

Then suddenly, stumbling out of nowhere, I was at the Iraq frontier. Here I had an experience of my driver,

Hussein's, resourcefulness. As if from the air, he produced a thermos flask, two ladies' handbags of shoddy material, and a cheap wrist-watch with painted hands. This sleight of hand had a magic effect on the customs officials, for within a few moments documents were filled in, my already over-scored passport was stamped afresh, a child had been prevented in the nick of time from being sick over my tourist pass, and we were off once more.

Then, at the Iranian frontier, where in the midst of desolate country you are confronted by the strange spectacle of a modern customs house rising like a palace in some half-forgotten dream, the scene changes, and dunes give way to red-grey rock and stony ground, traversed in spring and winter by racing streams and wadis from the nearing mountainside. All day now you will travel along the tortuous road until, coming over a more than usually abrupt hilltop, there lies before you, suddenly outlined against a magnificent sunset sky of clear blue and gold, a sheer wall of harsh, russet rock, a menacing chain of mountains, stretching unbroken to the northernmost horizon. These mountains



Iris Sams

(Above) *The Elburz Mountains above Tehran. In summer it is cool up here and many visitors from the city are attracted. (Below) Tadjrish, a characteristic mountain village in the Elburz*

Iris Sams





St John Chadwick

Dome of Masjid-i-Shah Mosque at Isfahan. Built in the reign of the illustrious Shah Abbas (1586-1628) it represents the height of Iranian art, notably in the unimaginable splendour of the tile work

dominate everything before them. They flatten out the paltry sand-dunes, and cast their cold shadow over Kermanshah straggling at their feet.

For this range is the key to the Iranian plateau. Over it, following the old caravan route, engineers have fashioned a marvel of workmanship; their skill is scarcely less miraculous than the instinct of those first travellers who, undaunted by the sheer rock face, found their way to the summit and down to the hidden plain. So today, there climbs over the range a smooth unbanked road, which takes one, snake-like, up 8000 feet or more, past bends and gorges, at the bottom of which wrecked cars, and occasionally one of the oil companies' great tanker lorries, bear witness to the dangers of travel even on such modern roads as these. From the summit of the pass the plains stretch eastwards as far as one can see towards the rising sun.

To stand there when the wheat is ripening far below is to look out over a sea of gold, swayed by the wind which catches at the yellow stalks and sets them shimmering in the sun. Nowhere in the country can you realize more clearly how Persian art acquired its colour, light blue tiles, gold-covered mosques, the splash of red and scarlet in the robes of long-dead emperors and kings, or what gave to Persia that wonderful, intricate detail, that microscopic clarity that can be seen in her miniatures. The Iranian sunrise or sunset contains no nuances; every colour is fixed, tangible almost, as though one could reach forth an arm and pluck it from its assigned position in the sky. Each crag, each rock, even the distant telephone wire, the one frail link with 'civilization', stands sharp-cut against the sky. Everywhere this clarity is intense; to see it is to grasp the key to Persian art in whatever shape or form, and through that to grasp the dominant feature of the Persian character—love of the unchangeable; love of the traditional; conservatism. For as Persian art draws its inspiration from nature herself, this art is naturally the interpreter of the Iranian character.

Go into the ateliers of Isfahan in 1940 and you will find, bent over a trestle table in a dim-lit room, where generations have worked before him, a white-robed, bearded, dignified old man who, with infinite delicacy of touch,

is adding the last details to a new miniature. Compare his work—and you will require a magnifying-glass to seize the full value of it—with that of any you will find in museums and private collections throughout the world, and you will see that the tone and subject matter, within a few self-set limits, never alter. Crowded onto ten square inches of polished ivory are kings and courtiers, sad-faced veiled ladies of the Palace, a huntsman with his falcon, a dog, perhaps a polo player from the retinue of Shah Abbas. Where is the modern soldier, whom war brought to Isfahan? Where are the symbols of progress, which even 18th-century painters in other lands delighted to portray? They are absent: probably because they disturb the harmony of true Persian art and thought.

And yet, Iran boasts a railway which in itself is a wonder of engineering; she has an Army, Navy and Air Force; a postal system; wireless stations; a modern police force dispersed throughout the kingdom supervising the entrance and exit of every town and hamlet, stamping out the brigands and bandit tribes who, even a few years ago, made travelling in south and east Iran far from peaceful. Here in fact there is everything which a 20th-century state could desire as the basis for her political structure; and, politically, Iran somewhat resembles the Republic of Portugal with a Salazar in the person of that remarkable self-appointed Shah, Reza Pahlevi.

But Reza is neither constitutional king nor direct dictator. All the threads of government are in his hands, but, unlike modern dictators, he delegates his authority, reserving to himself the ultimate decision on matters of importance. Since his acquisition of power, he has brought Iran closer to Europe than his predecessors had done in a hundred years.

He has also strengthened her international position. With the three neighbouring states of Turkey, Iraq and Afghanistan he has concluded the Saadabad Pact of Non-Aggression, while Iran and Egypt are drawn together by the marriage of Shah's son and King's sister. Friendly relations have been maintained with Britain and with that rather frightening colossus, Russia, who in some ways has been instrumental in drawing Iran

out of the isolation into which geography rather than indifference had plunged her.

The recent development of railways has opened up trade routes across the Caspian and down the Persian Gulf; the motor car, and with it a very profitable lorry-borne trade, is increasing possibilities of commerce to north and south, while the extension of air-lines from west to east offers new and

tempting opportunities to a country whose potential natural wealth (minerals, fruit, the silver trade, textiles) still waits to be developed.

But fundamentally Iran is still in transition. Under the guidance of Reza Shah she will move with increasing speed towards the full fusion of Western and Middle Eastern civilizations; and the result, as in Turkey, will be the



Black Star

A dargoon boat, engaged in the caspian trade at Pakleni, the principal port of Northern Iran—a small pleasant town, very hot in summer, Georgian rather than Iranian in atmosphere

absorption into a great civilization of the past of the amenities, scientific and social, of the 20th century.

The process however must be slow, for political faith cannot, unfortunately, move mountains, and no one realizes this more clearly than the astute and clever Shah. When, some five years ago, he passed a decree abolishing the traditional form of Persian headgear, there were disturbances in the religious town of Meshed and it was said there that there were old women still in the capital who vowed never again to leave their homes, rather than be seen in a modern European hat. But such opposition necessarily accompanies any great reform. I have seen for myself the surprising change which in one year came over the style of women's dress in Turkey: in the first flush of westernization, no woman seemed to know or care which was the front and which the back of the antique Paris model with which she was landed by some industrialist whose 20th-century outlook had taught him never to let a good opportunity slip by. Twelve months later you could walk through the main streets of Istanbul and imagine, as far as fashions were concerned, that you were in the suburbs of Paris or Marseilles: skirts and tailor-made suits were worn with a poise and confidence and rouge and lipstick applied with a surety of touch which left the visitor with the impression that the Turkish woman had been born into a world of Western fashions.

In Iran, too, fashions and rooted habits have changed as if some magician had waved his wand over the whole country: streamlined American cars now replace donkey-carts, camel convoys and strolling merchants: modern schools, such as the splendid American college on the outskirts of Tehran, are filling the gaps in technical and scientific education: metalled roads are bridging hitherto impassable stretches of desert, uniting the Iranian people as they have never before been united: hospitals equipped on the most up-to-date lines bring relief to a country which formerly had an alarmingly high death rate.

I have made no mention of the war; but Iran's eyes are of necessity turned inwards, while she labours, like a disturbed colony

of termites, to perfect far-reaching reforms. It would be totally incorrect to say that Iranians have no interest in the events that are trampling over and tearing at the face of the world. Look at the map, and Iran's potential rôle in the battlefield becomes immediately evident. To the north, skirting the Caspian, lies the U.S.S.R.; westward, across Iraq and Turkey in Asia, the menace



St John Chadwick

Fountain in Shah Abbas's Summer Palace at Isfahan, called 'The House of Forty Pillars'



E.N.A.

of the Nazi war machine has drawn dangerously near.

Already there is a large and active German colony in Tehran, and the Iranians well know that oil is the goal of Nazi ambitions. Yet the Shah and his Ministers, who preserve the most correct attitude of neutrality to the representatives of all powers involved in the present war, ask for nothing better than to be left in peace: for them the war is a distant, bloody quarrel in which they have no interest and see little sense. Perhaps the conquest of Poland affected them more than any single event since August 1939, for Poland is a direct neighbour of the U.S.S.R., but, taken all in all, the war is to them a gigantic quarrel which they hope will keep within its predetermined confines, Europe and Africa.

For the moment, then, Iran looks questioningly westward, wondering perhaps a little whether her imported civilization will bring with it the germs of war and bloodshed, or whether, left to her own devices, she will be allowed to bring peace, welfare and prosperity to her hard-working, tradition-loving peoples.

(Above) *Fishermen from the shores of the Caspian.* (Below) *In the bazaar at Damghan. These men are sifting and grading oil nuts which will afterwards be crushed and used as lamp oil*

Iris Sams





Iris Sams

(Above) *In the Shimran Hills: a young shepherd with his flock of goats and fat-tailed sheep.*
 (Below) *A brick bridge over a stream crossed by the main road from Tehran and Damghan to Meshed*

Iris Sams





Wartime Zoo

by JAMES FISHER

THE Zoological Society of London has inhabited its familiar corner of Regent's Park for well over a hundred years. Ever since 1829 it has devoted itself to furthering the scientific study of animals, and to the exhibition of rare and curious creatures. It has worked with pride and dignity, a certain amount of humour, and the affectionate support of the people of London, to whom the London Zoo has been important and stimulating, both as entertainment and education.

Right up to the outbreak of war the pro-

gressive improvements of the Society's Council and its Secretary, Dr Julian Huxley, were making the Zoo more popular. Old and unsuitable buildings were being gradually replaced by modern ones; children came to be amused and ended by being subtly instructed in the Children's Zoo; for two years a series of documentary films made in the Zoo had run in the cinemas and left no doubt that the Gardens could show not merely a simple collection of animals, but the principles and pattern of their natural lives and evolution.



W. Suschitz

Finally there were the giant pandas, which arrived in December 1938, and had reached the peak of their popularity by the summer of 1939. More than any other single factor they were responsible for the fact that the 'gate' had broken all records by August. Worth nearly a thousand pounds apiece, they probably recovered their purchase money fivefold—possibly tenfold.

It immediately became clear that the Zoo was going to suffer pretty severely financially from the war. From the very first siren

on September 3 the gate dropped badly. Moreover a large number of the staff, who were members of the Territorial Army or of the various Civil Defence reserves, had to leave almost immediately. As a result the Society had to simplify its management of the Gardens and practise a pretty sharp economy. In spite of this there have been only two important changes. Poisonous animals were immediately killed and the Aquarium was closed and drained of water, the more valuable fish being stored in concrete tanks.



On the first day of the war, all the Black Widow Spiders, the most deadly creatures in the Zoo, were killed; for if freed they might have adapted themselves to our climate and multiplied. (*Opposite*) Mr Bushby, Assistant Curator of Insects, asphyxiating one with a few drops of ethyl-acetate

“Rations or no rations—I’m content!”

W. Suschitzky



One of the Zoo's chief wartime problems is food—not only rationing, but also expense. A plan has been evolved whereby Fellows and visitors alike may adopt their favourite animal and pay a small weekly fee to cover its board and lodging. Miss Dorothy Sayers adopts the porcupines

W. Suchitaky





"What about me, Miss Sayers?"

Peter A. Ray





W. S. S. S. S. S.

“They’ll be over any minute now”

The Tortoise House is now the home of the more valuable fish, which have been transferred from the great 180,000-gallon Aquarium to the small, improvised containers shown opposite. These can be kept at an even temperature throughout the year



Peter A. Ray

“What a scraggy old ersatz eagle . . .

“Eagle indeed! I’m a patriotic vulture”



The Zoo could not risk a bomb smashing the glass tanks and releasing a quarter of a million gallons of water into the Gardens. About a year later a bomb did fall, making a neat hole in the Mappin Terraces and bursting in the Freshwater Hall. As there was no water in the tanks the damage was small, amounting to perhaps a hundredth of the total value of the Aquarium.

Though no consignments of animals reach the Zoo from abroad, the collection has been kept up, nearly to its peace-time level. The Society continues to carry out its duties to science and to its Royal Charter. From its library rare and irreplaceable works have been packed off to 'a place of safety' in the country. Otherwise it remains open as usual to Fellows. The scientific publications, slightly less bulky than usual, continue and scientific meetings are still held.

Maintenance of the Zoo's scientific effort in war-time is, however, not so remarkable as maintenance of its collection. If the Zoo had to start again from scratch, it would have to spend tens of thousands of pounds and famous breeding stocks (such as the Grèvy's zebras) would be lost for ever. The Zoo has kept its collection comprehensive by careful management of breeding stocks, and by transfers from private zoos in England. To give examples, the breeding season at Whipsnade, the Society's park and farm on the Dunstable Downs, has been so good that there has been a surplus of bears, deer and certain species of antelopes. Among the birds, the Zoo seems assured of a plentiful supply of swans, geese, ducks, peacocks, pheasants, turkeys, guinea-fowl, parrakeets, cockatiels, budgerigars and many others. From private zoos the London Zoo has recently acquired such rarities as the Manchurian Crane and Père David's deer. A small herd of these deer is shortly to be introduced at Whipsnade; up to now the two hundred or so individuals of the species remaining have all been in captivity on the Duke of Bedford's estate at Woburn.

One of the chief wartime problems is food. With a few exceptions, Zoo animals do not normally eat foods now rationed. Chimpanzees and gorillas used to be given fairly large amounts of butter, sugar and fresh fruit, but substitutes have been found. The flesh-eating animals have always eaten horse. For

many years before the war the only beef in the Gardens was served to the human visitors and to a fastidious mongoose which had been spoilt as a household pet. So today the Zoo is not depriving anybody of rationed meats. For the rest of the animals, particularly those that eat plants, the Zoo has had to accept the same restrictions as the farmers. The Society is, as a matter of fact, a farmer in its own right; the undeveloped area of Whipsnade Park has always been used for growing crops and vegetables, and today nearly half the estate is under the plough. The products of this farm help to feed human beings, and also go a long way towards supporting the herbivorous animals. The main trouble with food is therefore not so much rationing as expense. Fish has become expensive, so one or two of the sea-lions have been lent to a Zoo in the United States, and the pelicans have been persuaded that lumps of horse-flesh dipped in cod-liver oil are as acceptable as fish.

To bridge the gulf between rising costs and falling income the Fellows hit upon an excellent plan. Early in the war a group of them approached the Council and asked if they could adopt their favourite animals. As soon as this scheme was started it proved a success, for not only did the Fellows join in but also many other individuals—regiments, business firms, schools and so on. The adopter does no more than pay a weekly fee calculated by the Superintendent to offset the animal's board, lodging and maintenance in good health. The most expensive animals are sea-lions and elephants, the cheapest small birds and mice. A full list of animals still available, and the price, will be given to anyone who asks for it by the Superintendent at the London Zoo, N.W.8.

The Zoo has, of course, had its share of the blitz. The Society's fine new trailer-pump has several times been used for other purposes than washing down the monkey-house roof. One of the animal houses has been destroyed and two others have been damaged. Two snack bars have disappeared: and there are a few recently filled holes dotted about the Gardens. The animals have had fortunate escapes. The only serious loss was at Whipsnade, where a time-bomb exploded and terrified the young giraffe, Boxer, who died some days later from a strained heart. In



W. Suschitzky

The storekeepers sort out good and bad acorns from the contributions sent by thousands of evacuated children as a result of the Zoo's broadcast appeal

London the bomb that wrecked the Zebra House released one of the zebras and a wild ass and its young; they were rounded up without difficulty, though the young ass persisted in hiding in a stoke-hole underneath the hippopotamuses. A small bomb smashed part of Monkey Hill, and did nothing more than give some of the monkeys freedom for a day or two. A crane escaped through a hole in the fence and was last seen in Regent's Park; three humming-birds flew through a broken window and were never seen again. A bomb hit the ravens' aviary, cracking a wall of the camel house, the oldest building in the Gardens. One of the ravens escaped and was last seen six miles away; there is no evidence that the camel got up or even stopped chewing the cud.

Throughout the blitz the Zoo's Civil Defence services have functioned well. It is

clear that the Society has been able to plan wisely for a place with several very special problems. Owing to the construction of their houses, the large carnivores are very unlikely to escape, and if they do, they can be dealt with by specially armed wardens.

To sum up, the Zoo is carrying on quietly and calmly in unfavourable circumstances. It has to fight increasing costs, a falling revenue and falling bombs. It continues to perform the objects which are laid down in its Charter. It continues to attract the support of its Fellows. It continues, not merely to exist, but to flourish as a learned body and as a standard collection of living wild animals; we have every reason to believe that it will keep up its hundred-year tradition as the home of careful animal management, of popular education and of honest entertainment.

Farms from the Desert

Land Reclamation in the U.S.A.

by ELSPETH HUXLEY

The ravages of soil erosion in the United States were described by Mrs Huxley in an article which we published in September 1937. The story she tells here comes as a cheerful sequel and suggests that in land reclamation, as in so many other constructive schemes for increasing the welfare of mankind, we may well look westwards for an example

At present men are so busy knocking down each other's cities that scant attention is paid to their equally destructive, if less spectacular, attacks on the fertility of the land. There is no time, now, to worry about soil erosion, dust bowls, failing water supplies and floods. They go on, of course, just the same. It was the last war that in effect laid the foundations of the dust bowl in the United States, because the price of wheat rose so high that totally unsuitable plain-land was ploughed up in a hurry and planted on a get-rich-quick policy. In this strange war the prices of commodities on the whole have fallen instead of rising, so that particular sort of calamity does not seem likely to be repeated.

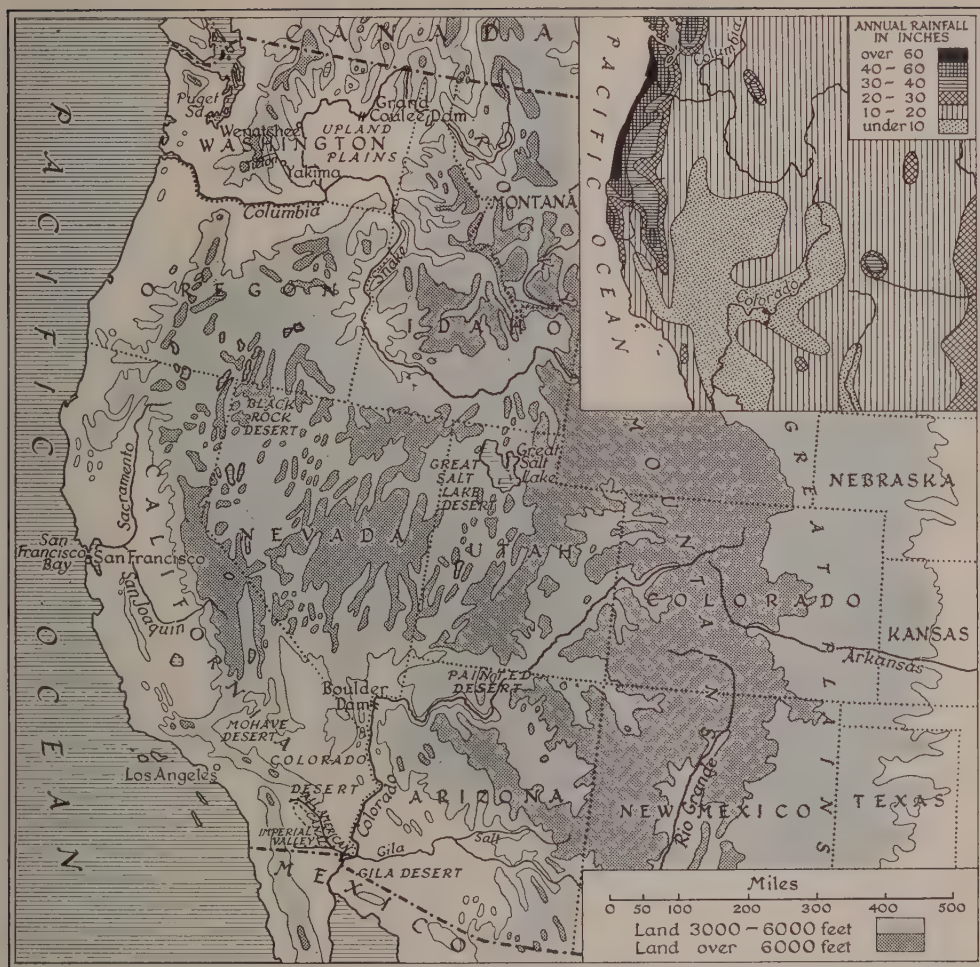
But in many parts of the world, erosion, the maltreatment of the land, marches on. Since it is a depressing subject, and since there is so much destruction about, we will turn to the opposite side of the picture—to land that is being reclaimed from, rather than land that is being made into, desert. For this process, too—the process of land reclamation—is marching on, even in such times as these. Today probably the most ambitious schemes on foot are those being developed in the western part of the United States by the Bureau of Reclamation, a branch of the Department of the Interior.

The United States is conveniently bisected by the line of the 100th meridian, which cuts through the centre of North and South Dakota, Nebraska, Kansas and Texas, down to the Mexican border. It runs slap through the middle of the Great Plains. To the west, the land soon begins to rise into the foothills of the Rocky Mountains; and then come the mighty crests themselves, deep in snow and forest. Beyond them lie the deserts of America: the sage-brush and yucca-spotted waste lands of Nevada, Arizona and California. These deserts are piercingly hot, barren, and

devoid for the most part of human life, save for sun-wizened 'desert rats' who still wander among the agaves and the burning rocks, chipping with hammers and hoping without end for some miraculous strike. To the north lie the upland plains of Washington, bare and dry, where wheat is grown for one year (it often grows no more than eighteen inches high) and the land is left fallow for two. The annual rainfall here averages anywhere from three to twenty inches: too low for a stable agriculture. The development of the West is a matter of water. The desert is there not because the land is infertile but because there is not enough rain. Given water, the fertility of much of it is astonishing.

It is here, west of the Rockies, that a great effort is being made to bring the desert into use: to make it blossom, if not with the rose, at any rate with fruit trees, with vines, with alfalfa and lettuces, with onions and clover and citrus and sugar-beet.

The West is fortunate in one way. It may have little rain, but it has big rivers. The problem is to harness their waters and so to irrigate as large an area as possible. This is not a new problem; Americans started to tackle it many years ago. In fact the West is dependent on irrigation to a far greater extent than is often realised. Nearly all the agricultural wealth of California, for instance, the famous citrus groves and onion fields, the lettuces and vines and walnuts and peas and beans and peaches which grow in California's three rich inland valleys, the Sacramento, the San Joaquin and the Imperial, would disappear overnight were irrigation works to fail. Today about seventeen million acres of western land irrigated by private enterprise is under cultivation. In 1902 the Government first stepped in with the passage of the Reclamation Law, sponsored by Theodore Roosevelt, which established a revolving fund, at



Stanford, London

first fed by the proceeds of the sale of land and later by other sources as well, to pay for the construction of irrigation and water storage works. About three million acres have so far been irrigated by the Bureau of Reclamation, which was established by the same law.

Last year the greatest and proudest of the Bureau's works was completed: the Grand Coulee dam on the Columbia river, claimed as the largest man-made structure in the world, three times bigger than the biggest of the Pyramids. In fact it is so vast that the storage reservoir which feeds it is a hundred and fifty miles long, reaching all the way to the Canadian border. A few years earlier another monster, the Boulder dam, was opened. This structure enjoyed a brief period of supremacy as the largest dam in the world,

until it was eclipsed by the Grand Coulee; but it is still the highest (726 ft.), and water from it is piped 250 miles to feed the city of Los Angeles.

The twofold aim of these dams is to store water for irrigation, and to produce hydro-electric power on a large (and therefore cheap) scale.

Thus the Grand Coulee dam is merely one part of a project to harness the fast-flowing Columbia and to irrigate some 1,200,000 acres to the south of the river, in the state of Washington. The rainfall in this region is only about eight inches a year; agriculture is therefore out of the question. But the soil is good, and so is the climate. The Columbia river flows from the mountains of western Canada to the Puget Sound, traversing first a

grand timber country of crag and precipice, then opening out into a broader valley, still enclosed by great hills, where the new irrigation farmers will settle. The Bureau of Reclamation looks forward to the day when 25,000 to 40,000 families will be established here, not to mention another quarter of a million people in the towns which engineers have built already—in their imaginations. The Federal Government has taken steps to see that the land gets into the hands of *bona fide* settlers, not speculators or land barons. A law has been passed limiting the water: a single man will be allowed enough to irrigate 40 acres, a man and his wife 80 acres. Families have already been settled on some of the newly irrigated land. The crops which are to be most encouraged are those of high value, easily sold, such as apples, peaches and citrus, alfalfa and sugar-beet. These have been proved to flourish, although before irrigation this land bore little but sage-brush and seemed incapable of supporting human life.

Indeed, there is nothing more startling than to come suddenly over the crest of a rocky, baked, barren sierra into one of these irrigated valleys you find in the western states. I remember one such, in Nevada, where the heat was so intense that the car's radiator boiled every few miles, and I could not stand on the road because the soles of my feet scorched through my shoes. The country on all sides was utterly parched and lifeless. Then we dropped down into a valley that was miraculously green. The colour was so vivid and startling that we could hardly believe it to be true. We came to a village, and on the outskirts was a stall where we stopped and bought huge, juicy, delicious peaches. It scarcely seemed possible for peaches to taste so good. Then, a mile or so farther on, we were back in the grey, sun-baked desert, among the sage.

Dams such as the Grand Coulee and the Great Boulder, though spectacular in themselves, form only a part of larger projects. The water, stored in reservoirs and controlled by dams, must then be carried down to the farmlands whose need is the mainspring of the whole enterprise. For this purpose aqueducts and canals are being constructed. Such a one is the All-American canal, recently

An aerial view of the Boulder dam suggests the immensity of its function and the vast scale on which land reclamation is organized in the Western States of America

(Black Star)



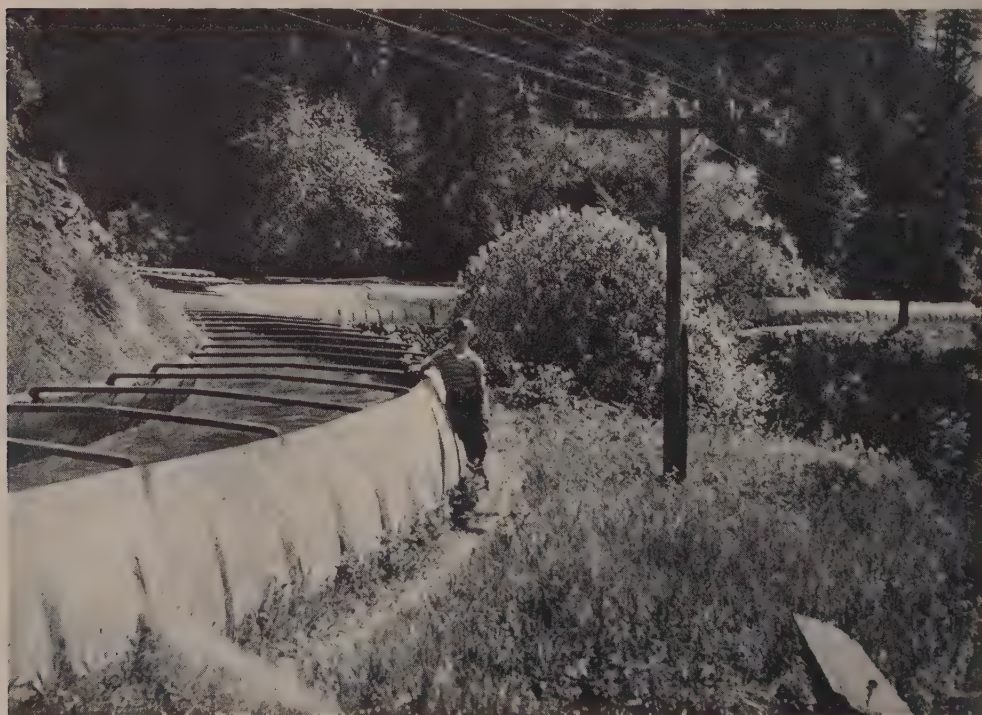


opened. This taps the Colorado river some distance below the Boulder dam, and carries a load of water south and west to the Imperial Valley, the most southerly of California's three irrigated valleys, where so much fruit and vegetables are grown. The main canal is 80 miles long; a branch now being built will extend the total distance to 130 miles. This is not a case of reclaiming new desert, but of enlarging and improving supplies in an area already highly developed. Altogether it is claimed that nearly two million acres of land will be irrigated by the two projects involving the Grand Coulee and the Boulder dams: namely, the harnessing of the Columbia and the Colorado rivers.

One of the problems that has to be dealt with is the silting up of dams. If nature were left to take its course, even such vast reservoirs as these would fill with washed-down earth from distant hillsides. One of the

most ambitious de-silting works in the world has been installed at the point where the All-American Canal takes off from the Colorado. Some idea of the size of the problem can be gained from the fact that an average of 60,000 tons of silt a day, with a possible maximum of 90,000 tons, is estimated to pass down with the waters of this river. It is hoped that the de-silting works, six pairs of enormous settling basins, will remove 80 per cent of this.

A minor problem is: how are the salmon, which make their way far upstream from the sea for spawning, to negotiate the largest dam in the world, three times the size of the biggest Pyramid? In the Grand Coulee there was no solution, and the fish had to be transplanted. But in smaller dams it was solved by means of fish ladders up which fish can leap in stages, or by means of fish elevators which whisk them up and over the dam to continue their journey.



Pictorial Press

Canals from the great dams and reservoirs carry water through the Western States, transforming deserts into fertile valleys. Tieton canal, irrigating one division of central Washington



Pictorial Press

Main canals are tapped at intervals by lateral canals leading direct to the fields. Opening a sluice in the Arizona Salt River system, where natural rainfall is sufficient for only one month in the year



Pictorial Press

Before irrigation: barren land in Arizona on which nothing but the prickly cactus can grow—

Part of the huge quantities of hydro-electric power being generated by these various projects is used to pump irrigation water to areas that cannot be served by gravity canals; but most of it is sold to cities, companies and private users of all kinds. There has been some controversy over this, since the Government, which sells this power as a by-product, sometimes enters into competition with private enterprise. The final result is that cheap power is spreading everywhere in the West. Cables span wild mountain gorges, march over deserts, stride the range, carrying light and power to sparsely populated regions that would otherwise have little chance of getting it. At one time it was believed that the production of power might well outstrip the needs of the country, but the tremendous new demand created by the expansion of the defence industries has resulted in a shortage rather than a surplus of power.

It would be a mistake to let enthusiasm for these truly imaginative projects distort one's

mental image of the West. It is far from being a vast irrigated Eden. The region west of the 100th meridian comprises one-third of the area of the United States, and only three per cent of it is irrigated. These western areas are importing areas, to a large extent; they are not yet self-supporting, taken as a whole. At present only about one million people live on Federally irrigated land. The Bureau of Reclamation thinks in decades rather than in years. Ten, twenty years hence they believe that this figure will be vastly larger.

Reclamation has a special importance in that it is, to a limited degree, creating a new American frontier. The old one has gone, and its requiem has been said in a thousand surveys, essays, laments and political exhortations. In the last ten years, some 350,000 families have been driven from their homes in the semi-arid West by a combination of drought, erosion and economic distress. Where did these families go? Readers of *The Grapes of Wrath* will remember that many



Pictorial Press

—becomes, after irrigation, rich cropland and the home of prosperous farmers and villagers



Black Star

Building the Grand Coolee dam: (above) driving piles and sinking coffer dams in the Columbia River before the main work began. (Below) A later stage—all lit up for work by the night shift

Paul Popper

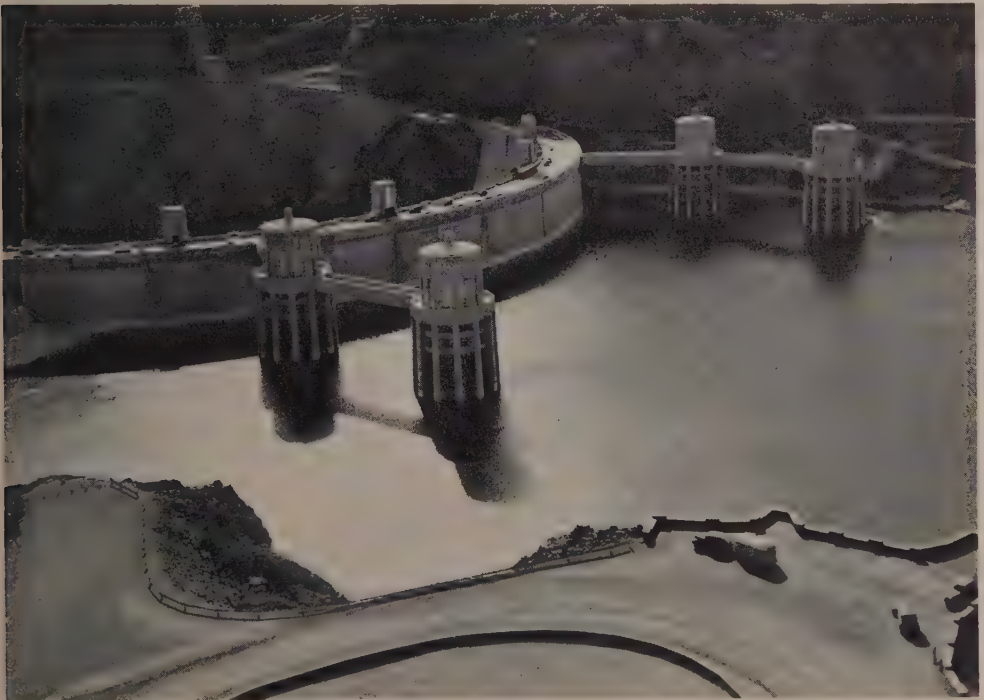




Black Star

(Above) In addition to irrigation the Boulder dam produces electricity, taken by cable to California, Arizona and Nevada. (Below) The generators are supplied with water via these intake towers

Black Star



of them went to California. But there is not enough living space for them all along the Pacific Coast. Thousands have existed, for years now, on relief. In the last ten years the far western States have gained nearly two million people in immigrants from other regions. So big an influx has not been properly absorbed.

If land can be reclaimed from the desert, here may be a partial answer. It will be new land, fertile land, and above all land that carries the promise of stability. In all semi-arid countries the fear of drought stands always at the farmer's elbow. Every few years it steps forth from the shadows and becomes a brutal reality. In such years despair creeps into the farmer's heart; his stock dies, his crops perish, often he must incur a load of debt from which only bankruptcy and dispossession can free him. On irrigated land, whatever the season, water comes trickling down, the crops bear and the land is fruitful. Such farming of course requires a higher level of intelligence and industry than most branches, and it is not to be supposed that all the dust-bowl refugees would make good at it. But it has one advantage. The authority supplying the water—the Federal Government in this case—is able to exercise some control over the farming methods adopted by the lessee. If he is a bad farmer, he can be warned; and if he is incorrigible, he can be turned out. Thus a repetition of the sort of disaster that occurred on the Great Plains when the dust bowl was created should be easily avoided.

The Boulder and the Grand Coulee dams, because of their immensity, have stolen most of the limelight, but they are by no means the Bureau of Reclamation's only major projects. Some 148 dams, big and little, have been built in the West since the Bureau started work in 1902. Each big one has been built around a river system—its catchment area, its basin, and the region which its waters can irrigate. Besides the Columbia and the Colorado rivers, the Sacramento, without whose waters much of the fertile part of California would still be desert, is coming in for the Bureau's attention. The second largest dam in the world is the Shasta, now in process of construction across the river's bed. When completed, the Shasta

dam will form part of a system of control over all the water that irrigates the Central Valley of California. The Sacramento flowing from the north, and the San Joaquin from the south, meet in a delta in the middle of this wide, black-soiled, baking-hot valley, and then seep through a myriad of channels into San Francisco Bay. The Shasta dam on the Sacramento will stabilize the river's flow, diminish floods and seasonal shortages, make more water available for irrigation, and generate power. A 46-mile-long canal will carry some of the water to the westward part of the valley, and open up new land to agriculture. Another dam is to be built on the San Joaquin, and water from there taken to the southern part of the valley; and two canals, one 160 miles long, will carry water to parts of the valley where irrigation is at present made possible only by pumping from thousands of deep wells. Continual pumping has already so lowered the water table that considerable acreages which once grew peaches, raisins and other fruits have had to be abandoned; now they will come into cultivation again. In the main the Central Valley project aims at the arrest of deterioration rather than at the opening up of new areas.

It is heartening, and at the same time tantalizing, to hear of these ambitious projects which aim at conserving the resources of the earth, making better use of them, and indeed of adding to the world's riches. Heartening that someone, somewhere, is able to build things up instead of knocking them down; tantalizing, because it makes us realise once again how little is being done in the British Empire in the way of land reclamation and conservation. Nobody, of course, expects governments in the midst of a war of survival to build dams bigger than the Pyramids. It might not seem impossible, however, to arrest decay, even if no active steps of rejuvenation could be taken. But such accounts as now trickle out of Africa and other parts of the Empire tell of dwindling rivers and forests, eroding hillsides, falling water tables and trampling surplus stock. In that millennium that many hope is on the way, let us pray that the cause of preserving the earth, upon whose products all must ultimately live or die, will have a squarer deal.



Pictorial Press

Above: Lettuce crops in the Imperial Valley, California, which needs only the water supplied by irrigation schemes to function as a winter hot house. Below: Abundant blossom foretells a heavy apple harvest in the Wenatchee district of Washington, irrigated by means of the Grand Coulee dam

Pictorial Press





T. H. Mason

Dublin Days

by JOSEPH HONE

Mr Hone, biographer in the past of George Moore and in the future of W. B. Yeats, has a family connection with Dublin stretching over 250 years and is himself a member of the Irish Academy of Letters. No wonder then that he can write of Dublin's stones and Dublin's genius with warmth and understanding

THE harbour of Dublin was, anciently known by the name of Lean-Cliath, from Lean, harbour, and Cliath, which literally signifies a hurdle or anything made of wickerwork. It also signifies weirs formed with hurdles for taking fish, and therefore any river or bay in Ireland where these weirs were found had the name of Cliath. Dublin being originally on or near one of these harbours was called Baile-Atha-Cliath, its official appellation today. The inhabitants had access to the river by hurdles laid on the low marshy ground adjoining the water. The Danes, when they mastered the place, gave it the name of

Dubh Linn (Dublin, meaning black pool), which also is Irish, and which in 1922, when the capital was being re-christened in Irish, might well have been preserved, if only because it fits so easily into English and foreign pronunciations.

In 851 the Danes were driven from Dublin by the Irish of Munster and Leinster, but returned frequently, and even after the battle of Clontarf, in 1014, were not entirely subdued. St Werburgh, close to Christ Church cathedral, is of older date than the cathedral itself; its vaults were in existence during the Danish occupations. In 1074 an Irish bishop laid the first stone

of Christ Church which was continued by St Laurence O'Toole, with the assistance of the Anglo-Norman invaders. The nave is Gothic and Strongbow's tomb is in the south aisle. St Patrick's, Swift's cathedral near by but outside the walls of the city, was at first a parochial church and was only raised to the dignity of a cathedral in the 13th century.

When Dublin surrendered to Cromwell in 1649 the population was about 10,000, Protestants or Englishry being in the preponderance, a petty medieval city with Dublin Castle on the cliff above the Liffey as its citadel. Sixteen-sixty, the restoration of the Monarchy in England, was the dividing line between ancient and modern. It was then that the great Duke of Ormond, the richest subject in Europe, laid out Phoenix Park (which is about seven miles in circumference and exceeds 1759 acres) and built four bridges across the Liffey; industry arrived, and more and more English with it. The town extended on all sides beyond its former limits, especially towards the north. Dublin University (Trinity College), which was founded in 1591 by Queen Elizabeth, on the edge of the swamps at the mouth of the river, by 1652 had left its wet-nurse period when Cambridge scholars formed the staff, and now it also began to grow. By 1710 it had become the breeding-ground of a distinctive 'Anglo-Irish culture', starred in time with the glorious names of Swift, Berkeley, Goldsmith, Burke, Grattan.

Berkeley, an expert in architecture as well as a famous philosopher, when travelling in Italy in 1713, insisted in a letter to an Irish friend that Dublin was "after all a finer city than he had yet seen". The improvements continued throughout the 18th century, and by its end Dublin was as modern a city as any in Europe, which certainly it is not now. Very few of the 'cage-work' houses built before the reign of Queen Elizabeth still subsisted then, and there was not a single example of the houses of lime, brick or stone which the inhabitants of Dublin began to build in the reign of James I. It was remarked by a



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Memorial to Swift in St Patrick's Cathedral: here Swift lies by his Stella under "the greatest epitaph in history"

writer on Dublin in 1832 that there was no ancient city of present importance in the British Empire that had preserved so few architectural remains as the Irish metropolis. With the exception of the ancient archiepiscopal palace, turned into a police barracks, there was no house remaining within its precincts erected before the beginning of the preceding century.

The period when Dublin was the capital of a resident nobility was a very short one. Most of the great palaces of Dublin were built in the last twenty years of the 18th century, when Protestant Ireland achieved her short-lived political independence; such are Leinster House and Powerscourt House on the south side of the river, and on the north Belvedere, Charlemont House, Tyrone House, the residence of the Beresfords, and many others.

Some of these great houses were only lived in by their original owners for a few years; Powerscourt House, for instance, was sold to the Government after the



From a drawing by James Mallon

Leinster House, Kildare Street, now the seat of the Dail. It was built in 1741 by the father of the first Duke of Leinster and sold by the second Duke after the Act of Union of 1800 to the Royal Dublin Society who first lent and then, in 1922, sold it to the Free State Government

Union for £15,000 and others for much smaller sums. The movement of rank and fashion from the north side of the city began in 1741 when Robert Fitzgerald, last Earl of Kildare, whose son was created Duke of Leinster, built Leinster House to the design of a German architect for a family residence. The Earl's prophecy was fulfilled: "They will follow me wherever I go". Malton's views show the pure line of the architecture which the city still treasures most. The Blue-coat Hospital is shown to be rather different, the architecture being simpler, but there is in the façade the same sense of harmony and purity of line.

After the union of 1800 the aristocracy and landed gentry no longer regarded Dublin as the capital, and Protestant Ire-

land gradually lost prestige. Very few of the famous Anglo-Irish families—the Fitzgeralds perhaps the only exception—were great enough to remain provincial. It is a curious thing that nearly all the Dublin palaces should survive, all of them now turned to banal uses except Charlemont House, where there is a gallery of modern art. Leinster House itself became the seat of the Dail and Senate. Rank left Dublin in the 19th century, but it was not driven out by riches. In what other town of Europe will one discover that the best known hotel of today was established over a hundred years ago? The Shelbourne Hotel, founded in 1820 by Martin Burke, still holds its premier place. From 1800 onwards Dublin has largely lived upon its past, with Merrion and Fitzwilliam Squares



From a drawing by James Malton

Another view by Malton (d. 1803): Powerscourt House, South William Street. Built in 1771 at a cost of £80,000, its charms were not long enjoyed by its original owner: it was sold to the Government after the Union for £15,000, and has since served as stamp office and drapers' warehouse

for its most fashionable localities, their occupants chiefly judges, doctors and high Government officials; gentility forsook the even nobler squares on the north side of the city (Rutland and Mountjoy Squares for instance), which became in the eighteenth-eighties a kind of Bloomsbury, but which have since degenerated further.

The 19th century saw the achievement of no new beauty in Dublin, although money was spent freely enough on new public buildings, such as the National Gallery, the National Library and National University. The only new great private house in Dublin was Lord Iveagh's renaissance mansion in Stephen's Green. Few towns have more attractive surroundings where even still suburbs melt quickly into country. Throughout this period there

was a continuous movement of opulent Dubliners to country houses, especially along the bay, which all the old travellers describe as the most beautiful in Europe next to that of Naples.

There was at the end of the last century and at the beginning of this a sort of revival of social life in Dublin, partly due to a succession of particularly magnificent viceroys. Home Rule seemed very far off after the fall of Parnell and the retirement of Mr Gladstone; Land Leagues had spent their force for the time; 'Ascendancy' regained its confidence. Edward VII came to Ireland and was received by the Roman Catholic bishops who decorated Maynooth with his racing colours.

Intellectually, too, there was a stir in the air. The Irish Literary Movement was in



T. H. Mason

Some of Dublin's new buildings: workers' flats erected by the Iveagh Trust on cleared slum areas

its first flowering—Yeats, Synge, Stephens and Moore were producing much of their most notable work. The great Dr Mahaffy, who had sent Oscar Wilde to Oxford with the remark “You are not clever enough for Trinity, but they will be glad to have you at Oxford”, reigned at Trinity College. Three philosophers successively occupied the post of Chief Secretary—the Hon. Gerald Balfour (the present Earl Balfour), George Wyndham and Augustine Birrell. Young James Joyce was collecting his material in the city for the books which have had such great influence on contemporary literature everywhere.

Nowadays when, to quote Thomas Mann, “the destiny of humans presents itself in political terms”, Dublin may not be what it was thirty years ago from a social and intellectual point of view, but it is still at least a city of conversation. It has been industrialized to a minor extent to conform to the political creed of inde-

pendence and self-support, but despite this and the attendant tariff policy, the spirit of the city is still nonchalant and airy. In small homes, the heart of any nation, this can be seen easily enough. The houses are rarely more than of two storeys and the ceilings are usually not high. In some of them as the coal fire burns brightly and gas, as likely as not, softly lights the sitting-room, the yellow gleam of paper-bound French editions glows in a corner bookcase.

Around that fire there may be three or a dozen people, usually boys and girls and old people. The latter have reminiscences about the last century, about important politicians, of writers now famous and their youth. Often the talk swings back to Joyce. One newspaper in a minute obituary notice called him a writer of obscene literature and Radio Eireann ignored his death altogether; yet among people fond of literature, and Dublin upon the whole is, Joyce's work is still a centre of controversy

and anything today about his life in Ireland as a boy is eagerly sought. Often these older people complain of his youthful arrogance and moodiness and tell stories to show their point. Contemporary Irish writers also are dealt with and there are many storms in tea-cups when certain of them overstep the limits of modesty. The talk, in fact, as really good talk does, moves from gossip to serious criticism, and back to gossip by way of argument. Young people bring into such circles the ideas and books of today and their restless hands will throw aside a copy of Racine to pick up a Kafka novel or a book by Ethel Mannin.

On Sunday evenings, for that is the day on which the great majority of these gatherings take place, the talk will begin with high tea—ham and a salad and cold roast from dinner with pints of very strong tea out of an enormous brown pot—and continue until far into the night. The passing of the last bus empties the room of the middle-aged visitors, but afterwards parents and children will poke the tired fire, trim the lights raised for goodbyes, and settle into conversation made more real and important by the lateness of the hour.

It would be foolish to suggest that most Dubliners spend their Sundays in this manner. They do not, and the long cinema queues show how thousands of people while away the holiday, but in a small minority of homes where there are students, doctors, journalists or university lecturers this example is followed. The animating spirit of the city, the spirit of the young, of those upon whose shoulders responsibility does or will lie, in fact the real



T. H. Mason

That grand rock in the shifting sands of drama: Yeats's Abbey Theatre

spirit of Dublin, shows that the city's cheapest and yet most precious possession is good talk.

On week-days, if you want conversation you must go into the heart of the city. The setting is different. The river of Dublin's ideas reaches a delta as it were, before being launched into a sea of articles, books, plays or radio-talks. In a certain 'pub' near the river prominent newspaper men, writers, critics and *littérateurs* gathered in much the same way as London's business men collect in houses near the Bank. It is a small place, its one lounge-room would not hold more than thirty people, and it is remarkable for containing, in proportion to its space, a great quantity of black artists-hats and a fair sprinkling of beards, ranging from a tawny goatee through a tight-clipped zionist adumbration to the full glory of a black spade.

Around the walls are hung caricatures of the house's most famous patrons, and recently the management has come to an



T H Mason

Inside the summer garden house built by the Earl of Charlemont (1728-1799), from Sir William Chambers's design, in the grounds of his house at Clontarf, northern suburb of Dublin



Chancellor

Another fine, if less magnificent, example of the late 18th-century architecture in which Dublin is so rich: Belvedere House, Great Denmark Street, now a Jesuit school. James Joyce was once a pupil here

arrangement with some painters whereby their work decorates the walls whilst waiting to be sold. Simple tables and simple chairs make up the furnishing. The whiskey is famous, as also the quality of the draught beer.

It can be seen that although Dublin now has almost half a million inhabitants, its intellectual life is continued by a limited

number of cliques. Almost never does religion give entrée or form a barrier. Bigotry is the one effective quality to immure a man in his own ideas and company, and even far-reaching political differences, unless they are brought to a head with a quarrel, do not render friendship impossible. There is something rather Johnsonian in the atmosphere of this

public-house. Its presiding genius, its Samuel, who arrives on his bicycle (for Dublin like Amsterdam is a city of bicycles), is a well-known journalist. For hours he sits there with a circle about him, a vast brown hat on his head—it is an Irish trick to keep one's hat on as much as possible—and if he does not preface his remarks with "Sir . . .", they do not lack the pungency and force so remarkable in the great doctor's statements. It is not often that voices are raised against him.

As long as you avoid the new cinemas, and eat in the old houses, and walk by night when the gleaming green double-deck buses have disappeared, you will be struck by the 18th-century quality of Dublin. Unhappily, where changes have occurred, no attempt has been made to keep that quality. Merrion Square, of rose-pink and maroon-weathered brick, has twisted iron balconies lining the mezzanine floors, for every door a fanlight and many an architrave in the Adam's style. On its

east side in the past year one of the houses has been refronted with cement. The outcry among Dubliners when first the contractor and his men appeared was great, but not great enough to prevent this foolish renovation. This is a typical example showing how little regard is paid to what is best in Dublin and also demonstrates the apathy or ignorance of the authorities controlling the city's appearance. Near the river on narrow straight streets, very like those of the St Germain quarter in Paris, some houses have been demolished and nothing put in their places, others are left in rack and ruin, yet still apparently able to house people, while in some few cases a new structure of steel and concrete has been built, wholly out of harmony with the rest.

In Merrion Square most of the houses are now Government offices or else turned into flats at a minimum of expense. A drawing-room, on the ceiling of which will be delicate tracery of plastic design exe-



T. H. Mason

" . . . for every door a fanlight and many an architrave in the Adam's style . . . " in Dominick Street

cuted by some old Italian artist, will have had its fireplace, maybe an Adam's, extracted and sold to an Englishman and have been divided into parts with wooden partitions to serve as a 'self-contained' flat. The smell of eggs and bacon rises to the high ceilings, to the plaster design, and the tenants complain of draughts.

Along the river-side are a few startling juxtapositions of new and old. There are curiosity shops, jewellers' with rings and watches heaped in a dishevelled pile, an optician in a shop above whose door is a plaque stating that he is an optician by appointment to His Holiness the Pope, and then in the middle—a dull hotel like a stertorous fat uncle quiet for once. In another place is the great concrete home of all the country-serving buses close to several auction-rooms. As the long red buses thunder up the cobbled quay, they drown the bell-man ringing out advertisement of an auction. The rooms rarely can contain the furniture to be sold and couches and wardrobes, and chairs and meat-safes,

all are ranged on the pavement in front of the windows. Black Anna Liffey flows placidly between her stone sides and barges plod up to Guinness's brewery with feathered steam fluffed above their red and black funnels.

There is no doubt that Dublin is cosmopolitan in certain respects. Some of the streets resemble Paris, much of it and its spirit is 18th-century, and it has one great similarity to Vienna. This last in the people's attitude to the week-end. They take it as an opportunity to go walking out to the nearby hills, just in the same way as Saturday sees the Viennese in their thousands going off to the Wienerwald. During daylight thousands of Dubliners set off on foot, in buses or riding bicycles. The top of the Feather-Bed mountain is only seven miles from the heart of the city; the Wienerwald is less from the centre of Vienna, but as many Dubliners reach the hills during the week-end as Viennese wander in their suburbs. Even the newspaper men set off for air and exercise, and those who do not, mostly young working people, promenade the streets for several hours before finally turning into a cinema.

Handel's *Messiah* was first performed in Dublin and throughout the 18th century there was a certain musical life intersected with the Castle circle. Wellington, as a Dublin boy brought up in this clique, wanted to be a fiddler but poverty made him enter the army instead. Always the city's music has been for leisured people only. Today, now that there are few leisured people and none of these rich, Dublin has not even a concert hall. Except for the Radio Orchestra, small and gallant to attempt anything, there is no professional orchestra and not even, since the disbandment of the Dublin Philharmonic Society in 1936, an amateur symphony orchestra. In peace-time, through the arrangements of a London impresario, there are six Celebrity concerts each year, featuring singers like Gigli and musicians such as Kreisler; and the Royal Dublin Society, a magnificent outpost of a past



T. H. Mason

More Georgian doorways in Dame Street



Chancellor

Charlemont House, Rutland Square, one of the many surviving great private 'palaces' of the 18th century which has not been put to banal uses: in it the splendid Municipal collection of modern pictures is housed. Its first owner, the fourth Earl of Charlemont, built, in addition, a country house called Marino in Clontarf, the summer house interior of which is shown on page 104

Ireland, gives its members weekly concerts in the winter to which virtuosos are invited from London. There is no Opera House, though one of the theatres was built for that specific purpose, and travelling companies, as well as the Dublin Operatic Society, another amateur group, do their best with old favourites like *La Bohème* and *Carmen*. For these, as well as the Celebrity concerts, a vast cinema with seating capacity of 4000 is engaged (the Dublin Operatic Society alone go to the small Gaiety Theatre), and unless the artists insist, microphones and electrical reproduction are thrown into service to carry the voices.

The theatre is served by that grand rock in the shifting sands of drama, Yeats's Abbey Theatre, and by two other repertory companies both of which use the name 'Gate'. One is Edwards Mac-

Liammoir Productions which produces a medley of plays of which the majority are post-war productions treated in the Reinhardt manner, choosing their plays almost exclusively from outside Ireland. The second company is called the Longford Productions and produces a similar sort of play as well as works by the Earl and Countess of Longford. Shakespeare is still the most profitable playwright in Dublin, which is amusing, for in London he usually flops, and the Gate Theatre produces at least two Shakespeare plays every season. Apart from these three theatres and apart from the out-and-out variety theatres, there is the Gaiety, an old house where the general practice is to play London successes with London castes.

To live in Dublin is to experience a strange sensation every day and every night. It changes in appearance with



T. H. Mason

The road over Featherbed Mountain, seven miles from the heart of Dublin—see the Sugar Loaf on the left—where Dubliners love to spend their week-end leisure

every ten minutes, for its weather and lighting are inconstant enough to be the joy of painters. Its streets are changing, broadened and resurfaced so that few are cobbled with tram-setts now. All the changes in Dublin are in material things—the streets and statues. Statues have been disappearing as well, some of them blown up by tomfools. George I, a fine mounted bronze figure once in the Mansion House garden, is now in Birmingham; after having been thrown into a backyard, he was recovered and sold to the Birmingham authorities. It was a remarkably fine statue and Dr Bodkin, late curator of the National Gallery, now in the same capacity for the English midlands town, carried out the transaction. George II in Stephen's Green was damaged beyond repair, even its fine plinth being destroyed, and now only a flower-bed marks its late position. It was upon the destruction of George II that W. B. Yeats wrote "that he would go into mourning but the suit he kept for funerals was worn out". 'King Billy', William III, of College Green,

went long ago. Strange to say, Queen Victoria on Leinster House lawn has been left untouched except by roosting seagulls. It stands in front of the National Assembly and is a statue remarkable not for beauty so much as size and dominating force. It does not resemble the late Queen.

The genius of Dublin never changes. On and on, talk continues, and the little cliques meet and disperse. At first it might be thought that the conversation is always on the same subjects. Perhaps it is; but new ideas are rare, if anywhere there are such things. What matters is the *way*. The new way is the equivalent of the new idea. A new way of saying an old idea is much better than some frenetic attempt to create a new idea.

The young, about the fire with their parents after the visitors have gone, poke the live coals, and out of the blaze, their faces shining in the red heat as they bend to warm their hands, come fresh thoughts and initiative. The strength of a country lies in its youth, and the youth of Ireland is not lacking in vitality.

The British Commonwealth

IV. Peoples of British Africa

by MARGARET WRONG

The future of Africa and the Africans will be of supreme importance in the world that emerges from the present war. Miss Wrong shows the extent of the British African colonies, the variety of peoples in them, and the complex administrative problems and points out, in view of the two divergent policies advocated within the Empire, the significance of the British Government's recent statement that "the primary aim of colonial policy is to protect and advance the interests of the inhabitants of the colonies"

THE African continent is greater in area than Europe, India, China and the United States together. From the Mediterranean to the Cape is over 5000 miles, and across the continent from Dakar to Guardafui is 4500 miles. Its four greatest rivers—the Nile, Niger, Congo and Zambesi—flow 4000, 2600, 3000 and 1600 miles respectively before they empty into the Mediterranean, Atlantic and Indian Ocean.

Territories under British rule lie in all parts of this great continent. In East and Central Africa British colonies, protectorates and the mandate of Tanganyika form a continuous chain between the condominium of the Anglo-Egyptian Sudan, Southern Rhodesia and South Africa. In the West four colonies and two mandates are separated from each other by French territory and the republic of Liberia. Between this group of four colonies and South-West Africa—a South African mandate—are French, Belgian and Portuguese territories.

A TASK FOR THE FUTURE

The population of British Africa is estimated at 52,660,371, of which 2,145,566 are Europeans. Density of population varies from barely 1 per square mile in arid areas to an average of from 40 to 70 per square mile in fertile West Coast territories. Accurate census returns and vital statistics are lacking for most areas, but infant mortality is known to be high, and disease and malnutrition are widespread. The need of a better standard of living to combat this situation is recognized and the prospects for the future are encourag-

ing, for since the outbreak of war an important pronouncement has been made in connection with the Colonial Development and Welfare Fund, namely, that "The primary aim of colonial policy is to protect and advance the interests of the inhabitants".

TYPES AND TONGUES

The peoples of Africa do not spring from a single racial stock, and generalizations about them are unsafe. At least three races were represented in Africa in ancient times—Bushmen, Negroes and Hamites.

The Bushmen, who may once have covered large areas, are now a dying remnant, numbering about 8000, in the Kalahari Desert in South-West Africa. The purest Negro types are found in the West African equatorial forest.

The Hamites, who may have come originally from Southern Arabia, and Semites, to which group Arabs belong, are of the same stock as many Europeans. Hamites are characterised by their light skin-colour, fuzzy, wavy or straight hair, and finely modelled straight or aquiline noses. Hamitic features are plentiful in British Somaliland and are found throughout British Africa. There are Arab communities in Zanzibar and in coastal areas in East Africa, whence Arabs took trade, and Islam, far into the interior. The Muslims in the Emirates of Northern Nigeria, and the Sudanese of the Northern Sudan, are proud of their Arabic culture. Invasion, migration and conquest by Hamites and Semites across the Sahara up the Nile valley and on the East African coast

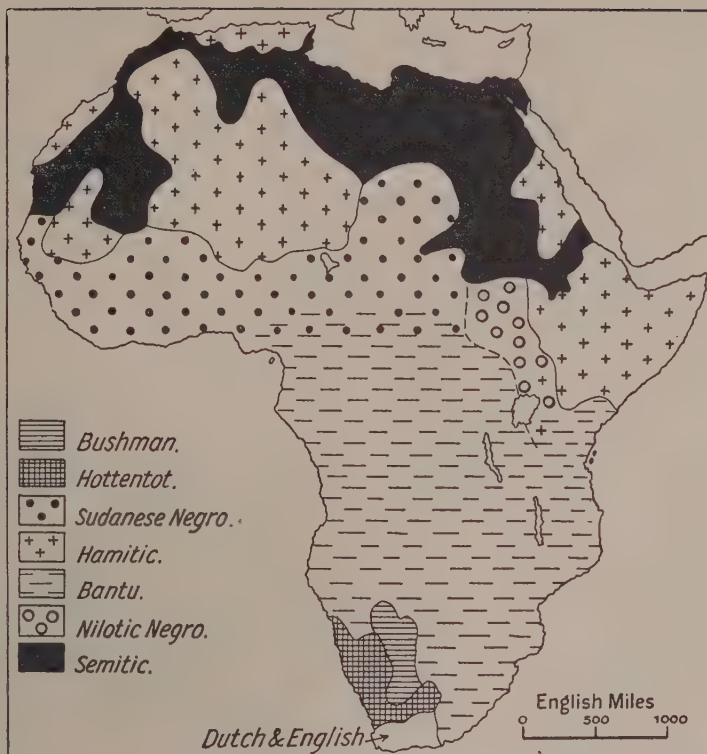
have resulted in intermixture of Hamitic and Negro peoples.

The total number of languages spoken by peoples of Africa is probably between 700 and 900. These may be grouped according to common linguistic characteristics as follows: Bushman, Hottentot, Sudanese and Nilotic Negro, Hamitic, Semitic, Bantu. The majority of tribes speaking Bantu languages lie south of an irregular line drawn from the Rio del Rey in the west to the mouth of the Juba river in the east.

Until recently tribal Africa south of the Sahara had no written records. The transcription of over 300 of these languages has been initiated by Europeans — mainly missionaries. The British Government encourages the use of selected African languages for the first stages of education in schools.

PASTORAL AND AGRICULTURAL TRIBES

Tribal Africa may be divided by occupation into pastoral and agricultural people. In coastal areas of West Africa where cattle do not flourish, Negroes have a settled system of agriculture and are entering world markets. Much of the wealth of the Gold Coast has been derived from the export of cocoa grown by West African farmers. Africans in Nigeria export palm oil and groundnuts. In East Africa the prosperity of Uganda has been built up on the growing of cotton by Africans; in Tanganyika the Kilimanjaro Native Co-operative Union of coffee-growers exports coffee; and Africans in Nyasaland are growing tobacco. Thus the interest of Africans today in world markets and prices grows, but many Africans still produce only subsistence crops.



From 'Africa', by W. Fitzgerald. By courtesy of Messrs. Methuen

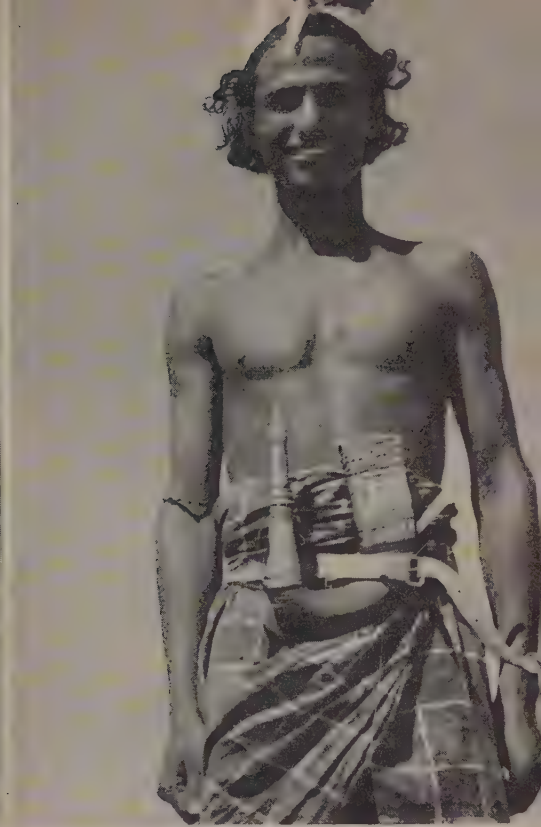
Map of Africa showing how the principal linguistic groups are distributed: the exact number of languages spoken is not known

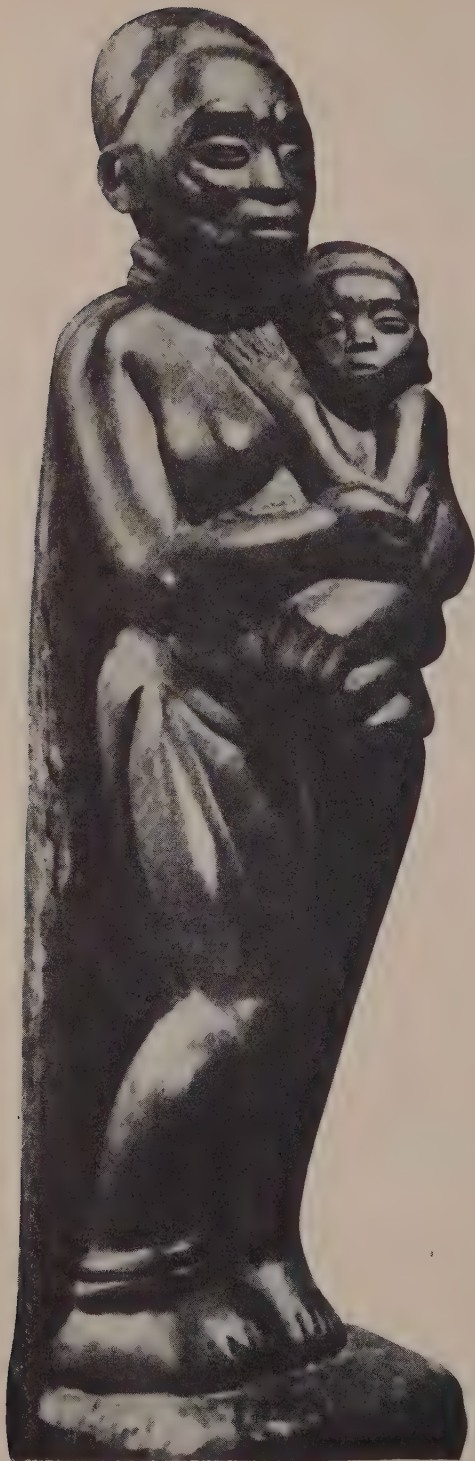
Behind the pastoral tribes are long records of invasion and conquest. The Masai rove the highlands of Kenya with their cattle, and set considerable store on raiding their agricultural neighbours, the Kikuyu. The Dinka and Nuer people move from marshland to higher ground in country bordering on the Nile. They are very tall and slim, with an unusual length of leg, wear no clothing and carry spears. Dinka cattle-men sleep with their cattle in large huts where fires of cowdung burn to keep off the flies. The descendants of pastoral tribes are the aristocrats of Uganda.

Many of the Bantu combine the keeping of cattle and agriculture. Thus the centre of the Ngoni villages in Nyasaland is the cattle kraal and near it the men discuss questions of the day. Tending cattle is men's work, while the growing of food falls mainly to the women. Small herd-boys often prefer the lore of cattle to the learning of the school.



The peoples of Africa do not spring from a single racial stock and generalization about their origins is apt to be misleading. Three distinct strains were represented in ancient times: Bushmen, Negroes and Hamites. On these two pages are a few representative Africans showing the characteristics of these different types. 1. A negro from the equatorial forests of West Africa. 2. A Basuto boy whose people, living in a small mountainous country, have the independent spirit that distinguishes mountaineers. 3. A Sudanese boy of Hamitic appearance, from Port Sudan. 4. A schoolgirl from South-Eastern Nigeria. 5. A smiling Arab who is proud to be British! 6. A policeman from West Africa. Note the tribal markings on his face similar to those shown in picture no. 1. 7. A Bushman woman. Her people, reduced to a few thousands, live in the Kalahari Desert of South-West Africa





In Bechuanaland for a great part of the year the boys and young men are in cattle camps.

In East and Central Africa agricultural people usually burn the land to clear it and follow a system of shifting cultivation, which allows it to lie fallow for a period. The establishment of permanent settlement, or progressive impoverishment of the soil and overgrazing, is producing serious erosion, which is forcing study of methods of intensive agriculture and is challenging old established custom and religious beliefs centring round cattle and the agricultural year.

THE PATTERN OF CULTURE

All over the continent sun-dried brick or puddled clay, with thatched roofing, are used for building. In West Africa rectangular houses are frequently seen, while in East Africa the round hut predominates. Among some peoples houses are built entirely of thatch and grass. Finely woven fences and mats are used in some areas to surround compounds. The great walled cities of the Emirates of Northern Nigeria and Arab towns on the East Coast have flat-roofed houses, whose massive doors, studded with metal, mosques and minarets, show the influence of Arabic culture.

There is a great variety of arts and crafts reaching in some parts a high standard of artistic achievement in form and design. Brass-work and carving in West Africa are notable. In the great markets of Northern Nigeria are to be seen cotton cloths, woven and dyed locally in the indigo dye pits, calabashes decorated with lovely and intricate designs, leather, metal-work and pottery. The importation of Manchester and Japanese goods, of tin and enamel ware, is menacing fine craftsmanship. Petrol tins and enamel basins are taking the place of local pottery, and Manchester cotton of locally woven cloth.

LIFE, DEATH AND MAGIC

Tribal Africans, uninfluenced by Islam or Christianity, share certain common religious beliefs, notably in the unity of the dead and the living, which is expressed in various forms of ancestor-worship. In many Bantu tribes

The work of African artists has great strength and an amazing sense of design. This Madonna is by Ernest Mancoba, a Bantu from South Africa who has studied in his own country and in Paris

a dead man is buried in the cattle kraal, and a woman under the floor of a hut, in order that their spirits may be in touch with the interests of their lives. The practice common in the past among some tribes of burying living followers with a dead chief was to provide him with a suitable retinue in the spirit world. Various forms of sacrifice to spirits are frequent among the pastoral people, and cattle play an important part in religious observance.

The practice of magic for good and ill is common. Harmful magic is regarded as a crime and it is a public duty to protect the community from those who practise it. Hence the hunting down and killing of people suspected of witchcraft. 'Medicine Men' by divination and other means seek to discover and protect the community from such magic. In addition they often administer herbal and other medicines to those who are ill. Thus the Medicine Man is a necessary and respectable member of the community, while the sorcerer who practises harmful magic is anti-social. Evidences of belief in magic and charms are plentiful, and include 'medicine' placed over the entry of huts and in the gardens, strings with rags fluttering on them, stretched from

branch to branch at the entrance to villages, and many other things.

INFLUENCES FROM WITHOUT

The African climate, except in South Africa and in the highlands of East Africa, does not attract permanent European settlement. Save in these territories the European community consists mainly of government officials, missionaries, commercial and mining people, who remain in the country for a period only. In all parts of British Africa Europeans are a small minority of the total population.

In East and South Africa there is a permanent Indian community dating back to ancient trade connections with India. In South Africa, most of the labour on Natal sugar plantations is Indian. Small Indian traders follow the roads, and wealthy Indians have large interests in both East and South.

Everywhere today in East, West and South Africa contact with Europeans is changing the life of African peoples. European dress is widely adopted by the educated. On West African railway platforms young men in European dress mingle with Muslims in flowing robes and tribesmen in scanty attire. On the roads leading to the great mining areas



Lubinski

Basuto woman displaying a bead belt which she has made in her spare time



Lubinski



British Museum

Where a European would draw a cartoon, the West African often expresses himself in carving: (left) woodwork on a helmet from Nigeria. (Right) A fine example of West African metal work: one of the famous bronze heads found at Ife in South-West Nigeria

of the Copper Belt and the South, Africans come and go on foot or by motor lorry. From their experience in the mines, they take back to their villages new ideas and new commodities. The demand for African labour by Europeans is affecting the villages too. In some parts of East Africa, notably in Northern Nyasaland, the exodus of young men to labour centres is so great that the life of the villages suffers both socially and economically. Increased facilities for transport encourage travel.

Contact between tribes and between Europeans and Africans raises for every colony concrete questions of land tenure. In South and East Africa the reservation for Europeans of large areas of land over which Africans have been accustomed to roam causes many difficult problems. The discovery of mineral wealth and mining development also raise land questions, as does the European system of individual ownership when compared with African tribal conceptions of communal use.

The penetration of Islam and of Christianity into Africa brings the people in touch with

world faiths, and leads them to look beyond the group to a larger community. The British Government allows freedom of religious instruction, and about 90 per cent of the educational work is being carried on by mission and voluntary bodies, with Government grants-in-aid. The demand for education among African peoples is greater than the provision to meet it, and the education of girls is behind that of boys. There is progress, however, in planning in all grades of education, including higher colleges, in various British territories. Year by year the supply of educated Africans for staffing professional, technical and civil services, grows. The Gold Coast, for instance, at the present time has an African Deputy Director of Education.

BRITISH POLICY

Forms of government are as varied as the peoples, ranging from highly organized and centralized systems to groups bound together by ties of kinship. The declared policy in



H. Le Roux

Among agricultural tribes in Nyasaland the women, after working in the field, return to their villages to pound maize for the porridge which is their main diet

British African colonies is to develop local administration through chiefs and rulers, using, as far as possible, established forms of procedure. This is a system which allows for wide variation according to the characteristics and culture of the people concerned. In Ibadan, a town of some 300,000 people in Southern Nigeria, the Native Administration court is held in a great hall presided over by the chief and officials dressed in gorgeous robes. Suppliants prostrate themselves as they advance to state their cases. It is a far cry from this to a village in East Africa where the local chief holds his weekly court under a tree, with one clerk recording sentences, and villagers sitting on the sun-flecked ground listening and giving evidence.

There are in British Africa outstanding differences in administration between areas such as West Africa, which have no permanent European population, and the Union of South Africa and the highlands of East Africa, where there is permanent white settlement. In South Africa a colour bar is enforced by legislation which defines the occupation and status of the African with the object of

guarding Europeans from African competition. Representation of Africans by Africans on the Legislative Council in Kenya is opposed by a strong body of white opinion. In West African colonies there is no legal colour bar preventing African advance.

The vast area of British Africa, with its majority of African peoples of different racial stocks and religions, with its many cultures, languages and forms of government, and its European and Indian minorities, presents great possibilities for the discovery of how people of different races can develop within the Empire a system which will bring opportunity and justice to all. The coat of arms of the great college of Achimota, on the Gold Coast, is a design of the white and black keys of a piano. The design is based on a parable. An African Vice-Principal, the late Dr Aggrey, used the keys of a piano to express the hope of black and white co-operation in the Africa of the future. "You can", he said, "play a tune of sorts on the white keys and you can play a tune of sorts on the black keys, but for harmony you must use both the white and the black."

In a Spanish Train

by V. S. PRITCHETT

THERE is nationality in trains. The cold, leaking, bumping wooden box mounted on iron wheels which you got into at Irun, for example, at seven in the morning, was very different from the warm, scented and somehow rather gallant creature which brought you over the frontier and was going back to Hendaye and Biarritz. In later years the Spanish trains improved, or rather trains de luxe were introduced, but the real Spanish train, scentless and smelling of Spanish coffee and Spanish tobacco, boiled milk—and what else was it? Feet, human beings?—never changed. Monastic, a timbered greenhouse on wheels, very wide, because, of course, the Spanish gauge was wider in order to add another Spanish inconvenience to travel, the coaches bumped your back teeth together, as if the springs had gone; the water rattled at the end of the corridor. In an hour or two it would spill and flow down towards the compartments. You pulled the windows down and they crashed as though they were going to break. The glass was loose and for the next twelve hours you were slowly deafened and arrived in that condition of nerve-racked exasperation and stunned stupor which put you half-way to being a Spaniard. It was a good introduction.

And then the people! First, second or third class, they were all the same: morose and gloomy-looking, with tired, ill eyes, and with a tendency to let things slide the further one got from France. The polish went, the smuts blew in, shoes were kicked off, slippers put on, humanity broke through civilization. A lady in furs was travelling with her canaries, an elegant from the casinos peeled his sausage and was careful not to spend more than a penny or two at the stations. At last, one noticed a sweeter smell. It was an odour of train oil, soft coal smoke and oranges. Oranges, oil and the lavender-like smell of the scrub—those would become the outer, containing smells of Spain. The many hours of travel—and no journey seemed to take less than six hours and was usually thirteen or

fifteen—might be boring, but every minute was strange.

Third class was best. Most trains stopped at every station and the third-class passengers took the shorter journeys. Therefore there was more variety in their company. And instant biography. The landlords are cutting down on labour, so this man who looks like a Roman Consul is going to Madrid for work. As a waiter or commissionaire he will look like a lord and behave like one. Here's a fat young priest who empties a bag of nuts into his lap and, without speaking, gives a handful to everyone in the carriage and cracks them for one old man who has few teeth. No one says "Please", no one says "Thank you". Tobacco is handed round in similar silence. When talk starts, everyone talks about his town or village. With such sighing, too, "*Ay, Andújar!*" "*Ávila, ay de mí!*" It is proud, it is quarrelsome, parochial and nostalgic. Arguments start. "I," shouts a man or a woman and they thump their bosoms when they say "I". They say "I" a great deal. You are travelling with a tribe of first persons singular, as insistent and emphatic as big drums in a band. A flat loaf of pale bread comes out, sliced longways with a massive cold potato omelette inside it like mortar. The whole thing is as big as an attaché-case. It is offered round and politely declined. "Enjoy it," the people reply formally, absent-mindedly. And the man pares it with his knife, like a shoe-maker paring a sole.

At every station there are great meetings of families. The half-starved soldier jumps out into his mother's arms, the beautiful girl is caught on the platform by roaring parents. The men embrace. The commercial travellers make for the waiting buses. "Man!" people call out in greeting. Or "Woman!" Or "Child!" At Baeza in the south, the beggars stand, covered in red dust, on the line shouting, "Bread! Bread!" At Valdepeñas, a crippled beggar, peevish as a duke, is wheeled by boys along the platform, and has them terrified by the bangs of his stick. He has



Toni Muir

At the station the soldier jumps into his mother's arms and you will hear "Woman!" called in greeting

spotted a chance they have missed—some sugar, bread or coins—and he is as sharp as a foreman. Down the platform go the sellers of goods. "Who wants peanuts?" "Who wants cakes?" "Who wants water?" South of Madrid that cry of "Water" is the dominating one of the Spanish railways. You know you are in a desert. You realize then what

the great Spanish art is: shouting. They've been shouting like a rookery in the train, but at the stations the shouts are longer, more calculated and rhetorical. A Basque business man woke me up at three in the morning outside Medina del Campo, to hear one of the porters call the name of the station. "Medin-a-a-del Cam-po-o-o, cin-c-o-o min-u-tos"

—what a tenor, the Basque said. Many came to the windows for the pleasure of this cry which went up like the Moorish call to prayer.

The sellers, of course, board the train. They dash on and play the accordion and the guitar as on the Irish trains; they dash down the corridors, shouting as if it were your last moment on earth and theirs too, "Lottery tickets! Out tomorrow." "Cigarettes!" "Cakes." Not two or three but a score, one after the other. At Andújar, at that break in the hills which opens into the ocean of Andalusian sunlight, I was alone in the compartment. The bell had struck. The train was about to leave. Suddenly a wild man like a boxer jumped into the compartment, flung back his jacket and shouted at me, "Knives!" Bound round his waist were four coloured belts from his belly to his chest and there must have been fifty knives of all kinds stuck there in this human arsenal.

And then the engine, hoarse as a frog, drew you out. Distantly you saw the town, like a flat line of earthenware on the plain, three miles from the station, of course. For it was a rule that no station should be anywhere near the town it served. In old cars, in rattling hotel buses, on mule and donkeys, or carrying their suitcases through the dust or the rain or the snow on foot, you saw your late companions. Perhaps, as you went on, the train crawled up at walking pace through the mountains and passengers for the next town called out the gossip to the people in the farms. One waving group after Andújar, I remember, ten or twelve of them waving from a rock; and the girl in the carriage shouting with excitement to them. "Yes, all the family will be at the funeral! What a funeral it will be!"

No trains could dawdle more than the old Spanish *Rápido*; you did not expect the *Correos*, the post train to move at all, but you caught him somewhere at three or four in the morning, so he was to be avoided. In the afternoon, at some lost place between Segovia and Madrid or down in Extremadura, the *Mixto*, the mixed goods and passenger train, was bound sooner or later to get you. Those trains died for hours at each station, while some goods truck was shunted on to them; and then they were born again. It was necessary to try a *Mixto* once, in order to know the depths of mechanical inertia.

There were fast trains, of course. There was that very Swiss-looking motor train which went up the Guadarrama like a tram, packed with people going to winter sports, clodded with snow and stacked with skis. It ascended through the heat of the pines to the glare of the snow-drifts. In an hour it did what took three or four hours on the expresses of the main line below, which would break down if there were ice on the line outside Segovia. And then there was that excitable little line which hopped and skipped and jumped through the hills of the Basque provinces by the sea. A very fast line that, with astonishing break-back curves. One became bored, it was so fast.

But what sticks in the mind is being knocked up at four in the morning at the hotel at Astorga and finding meals in progress in the buffet as one groped towards the Galician express which has to go through so many tunnels and foaming gorges; or at three, getting out at Plasencia junction, and being driven miles through dust and starlight into the town, to the kitchen of an hotel where the cook lay asleep in white cotton combinations on the table; or lying on the floor at a halt on the Tagus "waiting for the train" and seeing an iron bedstead erected in the waiting-room by the porters, and eventually the figure of the stationmaster in blue-and-white striped pyjamas and red-and-gold railway hat, conducted by a procession of porters to the bed, where he lay like a marquee. Or the little waiter who was going to travel under the seat to Madrid to see his girl and was looking for a carriage full of wide skirted peasants who would conceal him. "Honourable and trustworthy people," he said. All the trains had such travellers; the penniless, frantic and ambitious. But perhaps what sets the seal of one's affection for what was, outside of Russia, the worst and most perverse railway system in Europe, was a meal I once had on the line in Extremadura with some linesmen from the Portuguese frontier, fervent trades unionists. "We will give you our food," they said, "because you are our brother. We love all humanity."

The food nearly killed me, but, as we walked down the tracks and through the tunnels, I reflected that we were probably going quicker than the train.



F. A. Girling

Tennyson's England

by CHARLES TENNYSON, C.M.G.

There are few countries in the world where poets have been so deeply influenced by their natural surroundings as Britain, and the fields and hills, trees, rivers and seacoasts of these islands form a rich undertone in the work of our greatest writers from the times of Chaucer and Spenser to the present day. In this article, which we hope will be the first of several illustrating the theme, Mr Charles Tennyson describes how impressions of Lincolnshire and other homes recur throughout the poems of his distinguished grandfather

TENNYSON's life can be divided, geographically, into four periods. The first lasted from 1809 to 1837 and was spent, for eighteen years entirely and for the next ten years principally, in middle Lincolnshire. The second period, 1837 to 1853, was a time of wandering during which his family lived successively at Epping, Tunbridge Wells, Boxley (near Maidstone) and Cheltenham; but he himself, though making his headquarters with them, was a good deal in London and travelled much about England with one or two brief visits to the Continent. In

1850 he married and in 1853 settled at Farringford House, Freshwater, at the west end of the Isle of Wight, which was his only home until 1869. From that year until his death in 1892 he regularly wintered in the Isle of Wight and spent the summer at Aldworth, the house which he built 800 feet up on the slopes of Blackdown, overlooking the Sussex Weald.

Naturally the Lincolnshire period, which covered the first twenty-eight years of his life, was very much the most important in his creative development. The family home of the Tennysons was in the



Gerald Wilson

The little white rectory at Somersby, family home of the Tennysons, of which the poet wrote "Here thy boyhood sung long since its matin song"

little white Rectory at Somersby. This is a tiny hamlet which lies in an angle of the hills about fifteen miles from the North Sea, the nearest towns being Spilsby, seven miles to the south-east, and Horn-castle, about the same distance to the west—a district which is little known to-day and a hundred years ago was very remote and primitive.

Lincolnshire contains three types of country, known respectively as the Wold, the Fen and the Marsh. The Fen is the great stretch of flat reclaimed arable land that is bounded on the south by the Wash and on the east by the North Sea. North of this comes the Marsh which is not really marsh at all, any more than the Fen is now fen, but a belt of rich grass-land, varying between five and eight miles in width and running from Skegness right up to Grimsby. The Marsh, like the Fen, is

absolutely level and is divided into fields by broad ditches, lined in summer with tall feathery reeds—there are no hedges and very few trees. To the east a long range of sand-hills divides it from the sea and to the west lie the Wolds, a line of rolling chalk downs which runs from Keal and Alford due north to the little town of Louth and right on to Barton-on-Humber. From its southern end, and at right angles to it, there stretches westward to Lincoln a shorter range of hills of green sand formation, which would be continuous with the main line of Wolds but for a small stream—the famous brook, which flows down to it through the meadows just behind Somersby Rectory and, broadening at this point into a small river, reaches the sea at Wainfleet. At Lincoln the westward-running hills meet the long narrow ridge known as Lincoln Heath, which stretches



J. Dixon Scott

Lincoln Cathedral, the central feature of Tennyson's own county, grandly dominates the low-lying country of Nottingham and Rutland

due north and south with the dead-straight Roman Ermine Street running beside it on the east. Along this ridge Lincoln Cathedral can be seen for many miles, tantalizing the traveller with its apparent nearness, yet ever seeming to recede as he plods southward. The country between Lincoln Heath on the west and the Wold on the east is flat and fertile, and though the ridge is not high, only about two hundred feet at the most, it commands noble views, both to east and west and from the point where Lincoln Cathedral grandly dominates the low-lying country of Nottingham and Rutland to the south.

Somersby lies low down in the angle formed by the eastern and southern limbs of the Wold. The valleys are finely timbered, rich in pasture, dotted with old square-towered churches of grey stone and 17th-century farms and mansions.

The Wold was in Tennyson's time still largely waste land, untilled and little frequented, browsed by occasional flocks of sheep and here and there scarred with quarries; while the sea-shore beyond the Marsh and sand-hills was a most desolate one, for north of Skegness, which was then quite a small watering-place, there were only fishing hamlets at Sutton and Mablethorpe.

Alfred Tennyson was the son of the Rector of Somersby and Bag Enderby and was the third of eleven children. In those days, children in the country had to make their own amusements. There were no organized games, no newspapers or magazines, no wireless, no cinemas, no theatres. Moreover, family life at Somersby was often unhappy, so that the children had little encouragement to stay at home. It was not surprising, therefore, that the



Herbert Felton

*In the Lincolnshire fen: "Hard by a poplar shook alway,
All silver-green with gnarled bark:*

*For leagues no other tree did mark
The level waste, the rounding gray"*

boys, who were allowed plenty of liberty, spent most of their leisure roaming the countryside, fishing in the brooks, springing the gamekeepers' traps, or lying on the hill-sides and in the shade of the hedges, book in hand, for they were great readers. A walk of a mile or two would bring them to the top of Milecross Hill, whence they could gaze far away over the Marsh towards "the long low dune and lazy-plunging sea" and hear in the stillness the breeze

Bear upwards thro' the happy heights of
air
Chirp, bellow, bark and distant shout of
man.

There too they could play truant and
wander ecstatically

On the screaming waste of desolate heath
in midnight full of sound

or on April nights of racing cloud, when

The white chalk quarry from the hill
Gleamed to the flying moon by fits.

Little further away was the hill-top over Keal where they could lie and see southwards to Boston 'stump' rising 280 feet above the Wash and the Fen. Within a few yards of the Rectory garden ran the clear brook whose waters ripple through so many of Alfred's poems, and whose ways he loved to trace

Following thro' many a grove of pines,
White undergrowth of hemlock and hoar
lines

Of sallows, whitening to the fitful breeze
The voiceful influx of its tangled rills.

But most beloved of all was the sea-shore, whether at Skegness, where the Rector and a few neighbours shared a house for the holidays; at Wainfleet, with its wide flat sands and three-quarter-mile rise and fall of the sea; or at Mablethorpe, where at high tide the huge rolling breakers come right up to the foot of the tall ridge of sand-hills, on which Alfred used to stand with the grey sea stretching illimitably

away below him to the east and the green dyke-trenched marshland at his feet on the other side, feeling that he was treading on the "spine-bone of the world". It was not surprising that Edward Fitzgerald, always *laudator temporis acti*, used to say that "Alfred never should have left old Lincolnshire, where there were not only such good seas, but also such fine hill and dale among the Wolds as people in general scarce thought on".

But besides the earth and the sea there was also the sky, which to the wanderer on Wold or flat sea-shore unfolded the whole scope of its daily and nightly pageant. It was from his boyish wanderings, which often carried him on till dawn, that Tennyson derived his lifelong passion for the stars. So strong was this that Sir Norman Lockyer said of him in after years that "his mind was saturated with astronomy".

So far as is known Tennyson hardly went outside the small square of earth which lies between Spilsby, Lincoln, Louth and the North Sea during the first eighteen years of his life, and to it he returned in vacation times from Trinity, often bringing with him Arthur Hallam or some other of his Cambridge friends. There he buried himself for four years after Hallam's death, years during which he conceived many of the finest sections of *In Memoriam*, in which wold, fen, marsh and "bounding main" seem able to supply a setting for every mood and every memory; there he first met and became betrothed to Emily Sellwood of Horn-castle, who was to become his wife after fifteen years of enforced waiting, and there he composed the greater part of those two slim volumes, published in 1842, which first made the public and the critics realize that a new poet had arisen.

FitzGerald was right in estimating so highly Tennyson's debt to Lincolnshire. The fruit of it is to be seen in his work right up to the last years of his long and

incessantly productive life. Naturally the most direct impress of Wold, Marsh and Fen is to be found in early poems, such as the *Ode to Memory*, *The Miller's Daughter*, *The Gardener's Daughter*, *The Dying Swan*, *Mariana*, *The May Queen* and *Locksley Hall*. But the influence was permanent and never eradicated by later impressions. In those early years the poet had formed susceptibilities and habits of observation and study which were never to leave him. It was not only that the old impressions were continually emerging, as in the famous series of dialect poems which he began nearly twenty years after he had left the county and in which he brought to life with grim humour the tough old farming and peasant stock as he had known it in his youth. Even among his discarded writings old Lincolnshire reminiscences are frequent. One I recall in a rejected passage from the *Idylls of the King*, describing villainous Mark of Cornwall:

. . . Loud laughed the graceless King,
And like some long stilt-walker of the fens,
More wood than man, shambled away to
bed.

Again, there is a rejected line from *The Princess* describing the vacation 'Coach', whose pupils had deserted him—

No churchman deep in a neglected fen
So mouldered in a sinecure as he.

But these are curiosities. What really mattered were the deep-seated affections which Lincolnshire implanted in the poet and which he carried with him through life. Chief of these were his love of the stars, of the sea and of running water. No English poet has written of these so accurately and with such insight as Tennyson and this power we owe to the nights on the Wold, the hours of idling by the little Somersby brook or on the Mablethorpe shore, where he could watch the long ocean ridges "roaring into cataracts", or, at night, see the crest of the slow arching wave

Along that fable shore
Drop flat, and after the great waters
break
Whitening for half a league, and thin
themselves
Far over sands marbled with moon and
cloud,
From less and less to nothing.

But there must be a limit to quotation, even in an article which one would like to make all quotations, so I will take leave of Lincolnshire in the words with which Tennyson himself described his own leave-taking in 1837:

I climb the hill: from end to end
Of all the landscape underneath,
I find no place that does not breathe
Some gracious memory of my friend;

No gray old grange, or lonely fold,
Or low morass and whispering reed,
Or simple stile from mead to mead,
Or sheepwalk up the windy wold;

Nor hoary knoll of ash and haw
That hears the latest linnet trill
Nor quarry trenched along the hill
And haunted by the wrangling daw;

Nor runlet tinkling from the rock;
Nor pastoral rivulet that swerves
To left and right thro' meadowy curves,
That feed the mothers of the flock;

The second, or wandering period of Tennyson's life, has little significance from our point of view.

The Farringford period is quite a different matter. Here Tennyson found his first real home, since he left Somersby. Here he brought his bride and here his children were born. The Isle of Wight was in 1853 very different from the Island of today. There were no 'holiday resorts' west of Ventnor and Cowes, only one boat crossed daily from Lymington to Yarmouth and no train ran from Brockenhurst to Lymington, so that the traveller had to drive the eight miles in a village fly. When the Tennysons came to settle at Farringford, they missed the steamer and had to cross the Solent with their two



The Times

The coast, "all sand and cliff and deep in-running cove", at Freshwater Bay. The monument to Tennyson stands at the summit of his favourite walk

servants in a rowing-boat. When the party reached the house, the two maids burst into tears, protesting that they would never be able to endure so desolate a spot.

This desolation was part of Farringford's charm to the poet. The modern villages at Freshwater Bay, Freshwater Green and Totland did not exist. There was nothing at the Bay but an inn and a few fishermen's cottages. A small hamlet clustered round old Freshwater Church, perched over the upper waters of the Yar. Elsewhere there were only a few greystone farms and cottages with thatched or stone-tiled roofs. But the country had a remarkable variety. Along the south of the Island, on both sides of Freshwater Bay run high ranges of down, with precipitous chalk cliffs, fully

as impressive, if not quite so tall, as Beachy Head. About the cliff-face are sheep tracks and rabbit runs and ledges, where one can sit watching "the wrinkled sea crawl" far below and hearing the gulls and jackdaws wail and chatter beneath one's feet, while every now and then a kestrel or peregrine will sail out and glide away over the sea with that still-winged sweep which is one of the miracles of motion. From the ridge of the down, one can see the grand profile of the Island, curving out to the east in a succession of bays and headlands with St Catherine's Down at the end of the vista; away to the far west is Poole Harbour, with Weymouth and the Dorset hills plainly visible in clear weather.

The north coast of the Island is a suc-

cession of low wooded or heathery knolls, with a break where the little town of Yarmouth clusters about its church tower and harbour like some miniature city in a book of hours. Beyond that stretch the narrow, brisk, blue waters of the Solent, flecked with the white of yacht sails and the foam of shoal water. Beyond that again, the dark green-tufted carpet of the New Forest, the sweep of Southampton water and the historic southern shore of England curving away to Portsmouth.

Farringford is a solid square late Georgian house, the woodwork of whose tall windows is absurdly, but agreeably, shaped in imitation of Gothic traceries. On three sides of it copses of pine, ilex, oak and elm, muffled in ivy, press close about the walls and in the front, the boughs of a huge cedar brush the walls over which climb magnolia, clematis and jasmine. Between the cedar and the stems of two great elms which stood right in front of the drawing-room window, one could see over the tree-dotted park northward to the Solent and eastward to the blue inlet of Freshwater Bay, above which rises the great green boss of Afton Down (not then scarred with roads or blotched with scabrous brick), while beyond stretch Compton Bay, Brook Sands, Blackgang Chine and St Catherine's Head, with a richness of colour and contour which is almost Mediterranean.

In spring, copses, park, meadows and narrow winding "lanes of elm and whispering oak" are thick with daffodils, primroses, cowslips, anemones, violets and orchids, and eighty-five years ago the little tract of country was a paradise for butterflies and birds—duck and waterfowl on the marshes of the Yar, every kind of gull, hawk and crow on the downs and cliffs, and rare migrants, like the hoopoe and pied flycatcher, often to be seen about the hedge-rows.

I am inclined to think that the first ten years which Tennyson spent at Farringford were the happiest of his life.

There is a theory, first, I believe, expounded by Mr Harold Nicolson in his brilliant and delightful book on Tennyson, that the Island and his family life had an enervating effect on the Poet and that the work of his Farringford period is inferior to that which succeeded it. I do not think there is any justification for this theory—at any rate, the first volume which he published after settling at Farringford showed no loss of vitality. *Maud*, the poem which gave its name to the volume, though not without faults and blemishes, was, perhaps, the most original and vital that he ever composed; and, what is more to our purpose, it teems with the influence of Farringford. First it is interesting to note that the poem owed its existence to an island neighbour, Sir John Simeon of Swainston, who suggested that Tennyson should weave a dramatic story round the stanzas beginning "Oh! that t'were possible after long grief and pain", which he had published in an 'Annual' called *The Tribute* nearly twenty years earlier. Then the old house "half hid in the gleaming wood" in which the hero lived is plainly suggestive of Farringford, as is the "dark garden ground" in which he paced:

Listening now to the tide with its broad-
flung shipwrecking roar
Now to the scream of a maddened beach
dragged down by the wave,

on the fateful night after he had seen Maud drive by in her carriage. Equally suggestive is the "little grove" from which he looks dejectedly out on the bountiful spring season,

When the far off sail is blown by the
breeze of a softer clime,
Half lost in the liquid azure bloom of a
crescent of sea,
The silent sapphire-spangled marriage
ring of the land.

Indeed, the groves and "woody hollows" of the Island and its southern sea are never

far out of sight or hearing throughout the poem.

Another poem in the 1855 volume is intimately connected with Farringford—the invitation to F. D. Maurice. Here we have direct description, done with all the precision and urbanity of Tennyson's Horatian manner, of the "Careless-ordered garden", the "milky steep" of the cliffs and the groves of pine in which the garrulous magpies chatter, while further on

the hoary Channel
Tumbles a billow on chalk and sand.

It is, however, impossible to trace any strong Farringford influence in the poems written after 1855. Even *The First Quarrel* (1880), which tells an Isle of Wight story, is wholly without Island atmosphere. The fact that Tennyson, after 1869, divided his affections between Farringford and a

new home is not, I think, responsible for this.

With the *Enoch Arden* volume of 1864 he reached the zenith of his popularity and as a result his delightful home became irksome to him in the summer; with improved railway communications, tourists began to flock to the Island—"A young sea village" sprang up at Freshwater, where "roofs of slated hideousness" contrasted distressingly with the thatch and stone tiles of the old cottages. Worse than this, the tourists did not hesitate to invade the sensitive poet's privacy. They stared and pointed at him on his favourite walks, they hid in his garden to spy upon him and even peered into his windows. Moreover, he was troubled with hay fever and thought that his wife, whose health was very delicate, might benefit by higher air in the summer months.



H. K. Merwood

Looking north from Farringford over the waters of the Solent to the southern shore of England



Val Doone

From his last home, on Blackdown Hill, the poet looked towards the rolling Sussex Downs

After some hesitation he secured a wonderful wooded site 800 feet up on the southern face of Blackdown Hill in North Sussex. Between this and the nearest village and railway rose a steep heathery hill, innocent of road and secure from 'development' as being common land. Here Tennyson built a Gothic house of grey stone, backed and flanked with woodland, but in front looking out over the weald of Sussex, which lies like a vast chess-board hundreds of feet below and stretches to the South Downs, through a gap in which, on a clear day, a gleam of sea is often visible thirty miles away.

Tennyson delighted in this new home, which he called 'Aldworth', after a Berkshire village from which his wife's family came. The house was large and the

garden entirely of his own designing. Tall windows gave him wide views over the great expanse to the south, and in front of the house was a terrace where Italian cypresses and hollyhocks towered up against the blue distance. A feature of the gardens was a succession of small lawns surrounded by laurel which every year grew taller and taller and were trimmed on the inside into smooth walls of green. Here the poet loved to meditate alone or to sit with chosen friends. There was an endless variety of walks about the wooded face of the hills and over its heathery summit, and the weald at its foot. The one thing which was lacking was a great river winding majestically through the plain below. There was, however, a delicious little stream which rippled

through moss and forget-me-nots, not many yards from the garden door, and if he pined for something greater, he could drive to 'Waggoners Wells' on the far side of the Hindhead range some twelve miles away.

Tennyson settled at Aldworth in 1869 and regularly spent the summer there for the next twenty-three years. He loved the place and derived benefit and stimulus from it to the end. Yet it is hard to trace any direct influence from it upon his work. True, he did sketch the outlook from his study windows in the Prologue to *General Hamley*, which he prefixed to *The Charge of the Heavy Brigade*, and the lines may stand as a pendant to those in which he sketched *Farringford* for Maurice:

Our birches yellowing and from each
The light leaf falling fast,
While squirrels from our fiery beech
Were bearing off the mast,
You came, and looked and loved the view
Long-known and loved by me,
Green Sussex fading into blue
With one gray glimpse of sea;

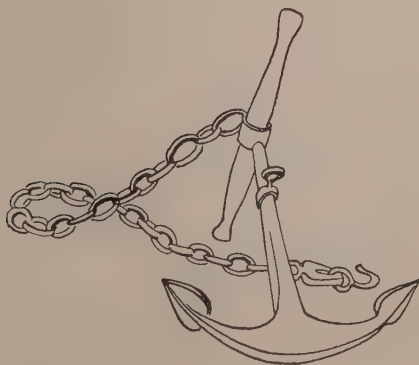
Aldworth seems to have had as little influence on Tennyson's later work as Farringford.

The explanation seems to lie in the inevitable change which advancing years

wrought in the Poet's creative faculty. As he grew older the Lyric impulse became less urgent—*Maud* was its last sustained outburst. It was no longer so easily stirred but seemed to require some specially strong stimulus, such as a foreign journey or a poignant personal recollection. In the earlier poems it was the lyrical mood which was able to condense and distil with such potency the spirit of place—as in the two *Marianas*, *The Miller's Daughter* and such an essentially lyrical Idyll as *The Gardener's Daughter*.

In later life it began to find an outlet in different directions; for example, in metaphysical lyrics like *The Higher Pantheism*, *God and the Universe*, *Wages*, *Parnassus*, and so on. At the same time his main activities were diverted to other fields, such as the writing of plays and narrative Ballads, which gave less free scope for topical reference.

In one late poem, however, this passionate fusion of local atmosphere with lyric emotion was perfectly accomplished, and, as though to redress the balance between the home of his youth and the homes of his manhood and old age, the poem was written on an autumn evening, when he was crossing the Solent by the little Yarmouth steamer on his way from Aldworth to Farringford. That poem was *Crossing the Bar*.



The Sacred Valley of Nepal

Where Two Faiths Meet

by MARGUERITE MILWARD

Nepal, an independent country whose friendship with Great Britain goes back to the early 19th century, is forbidden to outside visitors. Mrs Milward at the personal invitation of the Maharaja of Nepal recently spent some weeks there, studying the people and their culture. The following article and pictures are devoted to the temples and sculpture in Katmandu, Patan and Bhatgaon, capitals of the three ancient Malla kingdoms of Nepal

NEPAL, called the Land of the Gurkhas, is an independent Hindu kingdom. Wedged in between India and Tibet and bordered by the giant snow peaks of the Himalayas, it is completely isolated from the world and still partly unexplored. The Valley of Nepal, doubtless once a lake, measures fifteen miles across and in it is centred all the activity of the State. Legend relates that Manjusri, a great saint, saw, in a vision, the future religious significance of the Valley; so he cleft the encircling hills with his sword and drained the lake of its waters. No Mohammedan influence or Christian mission has ever entered the country, and it remains in many ways a perfect picture of the Middle Ages.

Before the coming of the Gurkhas in 1768 Nepal was entirely Buddhist, and though that faith has by no means disappeared in modern times, Hinduism, the religion of the Ruling House, has a far stronger hold. The meeting of these two religions is illustrated in a rare and fascinating way by the country's architectural monuments.

In 1895 by what seemed to be the merest accident an ancient pillar was discovered in the deep jungle or Terai of Nepal, on which

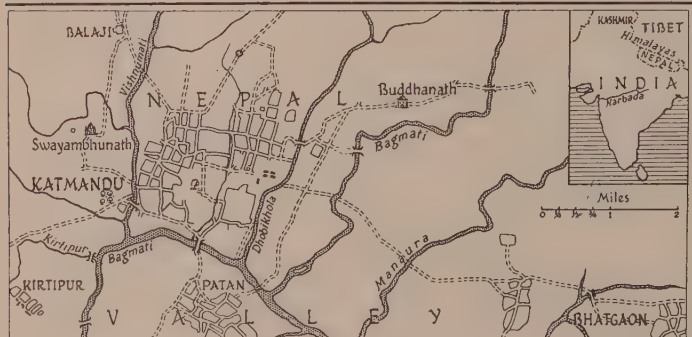
were inscribed these words: "The Buddha Sakyamuni was born here". It is clear from the rest of the inscription that this pillar was set up by Asoka, the great Mauryan Emperor and zealous missionary of Buddhism who lived from 273 to 232 B.C. His kingdom stretched from the sacred Narbada River to Kashmir, and it is more than probable that Nepal came under his sway.

In 225 B.C. Asoka came to the Valley and set up six stupas, mounds covering sacred relics, for the worship of Buddha. One of these stands on a hill in the little red brick town of Kirtipur, the other five are in Patan, ancient capital of the Malla Kings, the reigning dynasty in Nepal from the 10th to the 16th century. The stupa in the centre of Patan is all gilded and disfigured, but the other four, which mark the points of the compass outside the city, are as simple and unchanged as when they were first set up. These six little stupas are the earliest known architecture in the history of Nepal.

At a much later date, inspired no doubt by Asoka, two great *Chaityas*, or temples, were built, for Nepal had become a great place of pilgrimage. One of these, known as Buddha-

nath, stands in the middle of a plain, green with paddy and sugar cane, three and a half miles north-east of Katmandu. Its great white hemisphere with high golden crown shines out for miles.

It is surrounded by a circular platform, on the outer wall of which are niches filled with paintings of Bodhisattvas (those striving to attain Buddha-



Stanford, London



All photographs by Marguerite Milward

The Chaitya or stupa of Buddhanath, visited annually by hordes of Tibetan pilgrims

hood) and Tibetan prayer-wheels which are turned by pious visitors. The tower or *toran* has curious painted enamel eyes on all four sides with a question mark underneath. Buddhanath was probably built by Manadeva in A.D. 496. It is still in direct communication with Lhasa and under the control of the Dalai Lama. An old Tibetan monk takes care of the shrine and the Vihara, or hostel, which encircles it. Hordes of Tibetan pilgrims come annually, braving the passes of the Himalayas for the sake of their faith.

The great Chaitya of Swayambhunath, on

the crest of a wooded hill 300 feet high west of Katmandu, is of even earlier date. Legend says that the hill sprang up on the spot where the last lotus-flower, emblem of purity, rested when the Valley was miraculously drained of its waters.

In the precincts of the purely Buddhist monument there is a little temple erected to the Hindu god of smallpox, Devi Sitla. When this dread disease was rife in the Valley, the Buddhists, having no god of their own, borrowed one from the Hindus.

The great round white dome of the Chaitya, encrusted with mud and lime wash, is



(Above) The Vajra, or thunderbolt, symbolizing wisdom
(Below) A pair of cat lions, guardians of a Katmandu temple



untouched by the centuries, but Nepalese art has spread itself in the erection of an ornate and many-ringed pinnacle representing the thirteen Bodhisattva heavens, the gilded finial of *Adi Buddha* or highest heaven, and the square toran with metal pictures of the five Dhyani Buddhas (celestial beings) and great all-seeing eyes painted on the base.

On one side of the platform is a shining gilt pagoda where a flame, symbol of the supreme deity, burns for all time. Tibetan monks guard it night and day. Little monuments and shrines, built by the faithful to acquire merit, crowd round the central stupa. The main entrance is on the opposite side, a formidable flight of 600 steps guarded at the bottom by three colossal statues of Buddha, and at the top by a curious double-headed ornament, the *Vajra* or thunderbolt of Indra. The ancient stone base, of much earlier date, is carved with a lively ring of twelve animals, the year cycle of the Tibetan calendar. Serpents wind round the top and where their heads meet worshippers bend down and kiss.

Pairs of cat-lions, symbols of protection and strength, guard all the temples and gateways. No building is without its guardian beasts. Some are very ancient and of great artistic merit; some have been copied by a later generation. They watch over Buddhist and Hindu temples alike with great impartiality.

In many temples of Nepal Buddhist and Hindu worship the same image under different names. The Nepalese are not deeply religious, they are a pleasure-loving people expressing themselves in song and dance. Many aspects of austere Buddhism do not appeal to them, they lean towards the colourful practices of the Hindu faith. To keep its adherents, modern Buddhism has borrowed many popular Hindu features, while Hinduism, with its usual elasticity as to number of gods, has adopted Buddha as a saint and included him among the many incarnations of Vishnu. In

this way all festivals are kept by Buddhist and Hindu alike. This strange intermingling of the two religions gives Nepal a great sweetness and tolerance rarely met with.

Another Buddhist type of architecture is the ancient Mahabuddha temple in Old Patan. With its one central tower it is reminiscent of Bodh-Gaya in Bihar, the great Buddhist monument of India. It is built of carved terra-cotta, a special industry of the Newars—the original inhabitants of Nepal who were conquered by the Gurkhas in mid-18th century. The terrible earthquake of 1934 did serious damage here and the whole temple collapsed. With amazing industry and patience it was rebuilt and copied exactly from old plans and diagrams.

In the little courtyard is a small tower built of fragments collected from the ruins. This sculpture, Hindu in character, is full of life and fantasy and shows the genius of the original builders which, alas, no copy can reproduce.

Inside the ancient temple of Buddha Bhagawan in Patan is a decorated brass shrine all gleaming with gold and ornament. At the entrance are superb brass elephants with riders; metal casting is one of the great arts of the Newars, and a body of them do all the metal work in Tibet. Lively *garudas* (legendary forms of Vishnu, part bird, part beast, part human) and monkeys in bronze decorate the square. No visitor is allowed to walk inside the courtyard or near the shrine, but the children, quite lacking in reverence, climb over everything in their anxiety to see and be photographed. Little pagodas and stupas surround the central temple, Tibetan prayer-wheels encircle it. Enshrined within is a Hindu god, although this is one of the most important Buddhist places of worship.

Bhatgaon was one of the three capitals of the Malla Kings when Nepal was divided up into three



(Above) *Hindu figures on temple of Mahabuddha*
(Below) *Centre shrine in the temple of Buddha Bhagawan*





Carved stone figures on the steps of a temple at Bhatgaon

principalities. The ruler of one of these, Bhupatindra Malla, was the progressive prince who in the early 18th century built the beautiful temples and the Durbar Hall.

The special feature of the temples at Bhatgaon are the processions of animals and figures on each side of the steps. Some of the original towers have fallen during the earthquake but the foundations still remain with their guardian beasts. New and dull

examples of Hindu architecture are made alive by the great charm of these decorative, symbolic sculptures.

The hideous black-painted image of Kal Bhairab 'in the centre of Hanumandhoka Square at Katmandu is a great contrast to the lovely Newar carving. This figure, fantastic and six-armed, is the destructive form of the god Siva and represents the triumph of good over evil.



Kal Bhairab, modern painted Hindu image in the main square at Katmandu

At an annual people's festival peculiar to Nepal this image is the centre of attraction and worship. It stands directly in front of the Courts of Justice, and it is said that judges and other officials were made to take their oaths here, and swear to administer justice by touching the feet of this terrible monster.

Other popular Hindu festivals in the Valley are *Holi*, the feast to the young god Krishna

when the body of the old year is burnt, and *Dewali*, pretty festival of lights when every temple and house is illuminated. At all these festivals permission is given by the Maharaja to gamble, an ancient and adored pastime of the Nepalese. The game played is one in which cowries are thrown down and bets are made as to which side will fall uppermost.

There are two statues of Vishnu Narayan





in the Valley of Nepal within a mile or two of Katmandu. (Vishnu and Siva head the two great divisions of the Hindu religion.) The original figure, more than life size, sleeps in a pool at Nilakantha, a word meaning 'blue neck'. It may be that this statue illustrates the form of the god Siva who, to save the world, swallowed a fiery potion that turned his neck blue, and lay down in a lake to assuage his terrible thirst.

The King of Nepal being an incarnation of Vishnu according to Nepal tradition, could not worship the image of Vishnu Narayan at Nilakantha, for if he looked upon himself he would surely die. So a beautiful copy, slightly smaller, has been made at Balaji, where kings may go and worship with impunity.

The figure lies in the centre of a little pond, on coils of the eternal serpent Ananda, half in and half out of the lapping water, a wreath of seven cobras round his head. Two hands above the surface hold conch and mace, two are hidden in the ripples. The unknown sculptor has portrayed in a most arresting way the sleep of eternity—the state of perfect repose which is the keynote of Buddhism. This same idea was originally found in Hinduism. Hindus and Buddhists alike visit the shrine, one of the most popular in the Valley. They seem both to find their Nirvana in the sleeping god.

Sleeping figure of Vishnu Narayan—in which followers of Nepal's two religions find that perfect expression of ultimate peace which inspires the faith of both

The Story of Rubber

by F. P. HUGGINS

Though it has received far less publicity than oil (the story of which was told in our pages in January and February), rubber is one of the essential raw materials of modern warfare. In the following article Mr Huggins sketches its life history and indicates how and where it has proved itself most valuable to mankind, both in peace and war

BEFORE Columbus discovered America the Indians of the Amazon were using rubber to make shoes, water-bottles, balls and even pear-shaped syringes with quill tubes which were used for enemas. Although these articles found their way, through sailors and travellers, to other countries, it was not until 1770 that we hear of rubber being used in Great Britain. It was in that year that the famous chemist, Joseph Priestley, found he could use rubber to remove pencil marks from paper. Soon small cubes were being sold in stationers' shops at 7s. 6d. each. For some time it was used only for this purpose and became popularly known as 'India rubber' although it came from South America, where it was called 'caoutchouc'.

In 1820 a patent for making 'articles of dress' from caoutchouc was taken out by a Thomas Hancock, but it proved to be an expensive process because a great deal of waste was caused by his method of cutting strips from the imported blocks. After much experimenting he invented a machine which enabled him to utilize the waste pieces. Three years later Charles Macintosh of Glasgow obtained a patent for making coats of what he termed 'waterproof double textures' by uniting two fabrics with a solution of rubber and coal naphtha. The modern version of this man's experiments are still known as 'macintoshes'. The United States were by then importing rubber shoes from Brazil in ever-increasing quantities. Then a Roxburgh factory started to produce rubber clothing, wagon covers and life-preservers, but the articles proved unsatisfactory because they became sticky in hot weather and cracked in cold.

Interest then began to wane until Charles Goodyear began his experiments. It is he more than anyone whom we have to thank for the comfort and convenience that rubber has brought into our lives. When the failure

of his hardware store in Philadelphia made him bankrupt, he looked around for something to recoup his losses. The possibilities of rubber interested him and he soon realized that to be of commercial use it was necessary to devise some means to prevent it from perishing when exposed to hot or cold temperatures.

He made many experiments for which he had to borrow money and was several times thrown into prison for non-payment of debts. His wife went out to work to enable them to live and on one occasion Goodyear used her only silk petticoat for his experiments. In 1839 he discovered that rubber mixed with sulphur remained unaffected by heat and cold—and became famous as the demand for rubber rapidly increased. But as nearly the whole of the supply at that time came from the fever-infested jungle which lines the Amazon, its collection was both dangerous and costly.

To Sir Joseph Hooker, then Director of Kew Gardens, credit is due for the introduction of rubber seeds into British territory. He saw the possibilities of this valuable vegetable product and in 1873 he persuaded the Government to give its consent to an expedition to the Amazon for the collection of seeds and plants with which experiments might be made at Kew. A certain James Collins was sent to the state of Para in North-East Brazil and returned with some hundreds of seeds of Para rubber (*Hevea brasiliensis*). From these only a few plants were raised. Most of them were sent to India, but they failed owing to the unsuitable climate. Three years later Henry Wickham, who was planting near Santarem on the lower Amazon, was commissioned to obtain another consignment of rubber seeds and to bring them to England. This man, who later became Sir Henry, chartered the s.s. *Amazonas* and, with the help of many Tapuyo Indians, seventy



By courtesy of the Indian Railways

Rubber plantation in the Southern Indian District of Travancore: Hevea trees in foreground, factory behind

thousand seeds of wild Hevea trees were placed between layers of banana leaves and carried to Santarem, at the junction of the Tapajos and Amazon rivers.

Fine weather on the voyage helped to keep the seeds in good condition. When the *Amazonas* reached Liverpool with her precious cargo a special train was waiting to take it to Kew. Only a small proportion of the seeds germinated and some of them were sent to Ceylon two months after reaching

Kew. Six years later, in 1882, these trees had their first tapping. That is how rubber first reached Malaya, which today provides nearly half of the world's supply and whose capital, Singapore, fifty years ago a jungle island, is now the centre of the Eastern rubber trade.

But many experiments were necessary before the Hevea trees became properly established in Malaya. Gradually the planters became interested and many of

them, disappointed by the yield of the coffee plantations, turned to rubber instead and met with success. In 1905, 50,000 acres were planted with rubber, much of the jungle being converted for this purpose. Today British Malaya has over one and a half million acres under rubber.

While this territory and the Netherlands East Indies have been constantly increasing their rubber output, Brazil had been steadily reducing hers. In 1910 the output of rubber from that country amounted to 83,000 tons out of the world total of 94,000 tons. By 1937 Brazil was supplying less than 2 per cent of the world's output of 1,135,000 long tons of rubber.

The United States purchases more than half of the world's output of rubber, and of this three-quarters is used for making motor-car tyres. It was realized by the authorities a few years ago that the U.S.A. would be in an awkward position if crude rubber supplies were suddenly cut off from the East Indies. Although synthetic rubber is being made, it is more or less in the experimental stage and it would take time to swing over to big-scale production. Therefore, the experts agreed, it was desirable that a source of crude rubber should again be established in the Western Hemisphere. Attention was focussed once more on Brazil and in 1934 a cargo of 5000 plantation buddings from Malaya, Sumatra and Java arrived at Belem (which used to be called Para, like the state of which it is the capital), previously the centre of the rubber boom in Brazil. Here they were transferred to a steamer and taken 500 miles up the Amazon to Santarem, and then another 130 miles up the Tapajoz River to plantations prepared for them by the Ford Motor Company, which, by the way, hopes to produce 76 million pounds of rubber annually by 1950.

Here, then, the descendants of the very seeds Sir Henry Wickham had collected sixty-eight years before had come home again, but they were higher yielding than their ancestors because of the experiments in propagation and cross-pollination made by British and Dutch experts. Research enabled these experts to combine the high quality of the native Brazilian trees with the high yield and good health of the East Indian variety.

There are two ways of crossing these



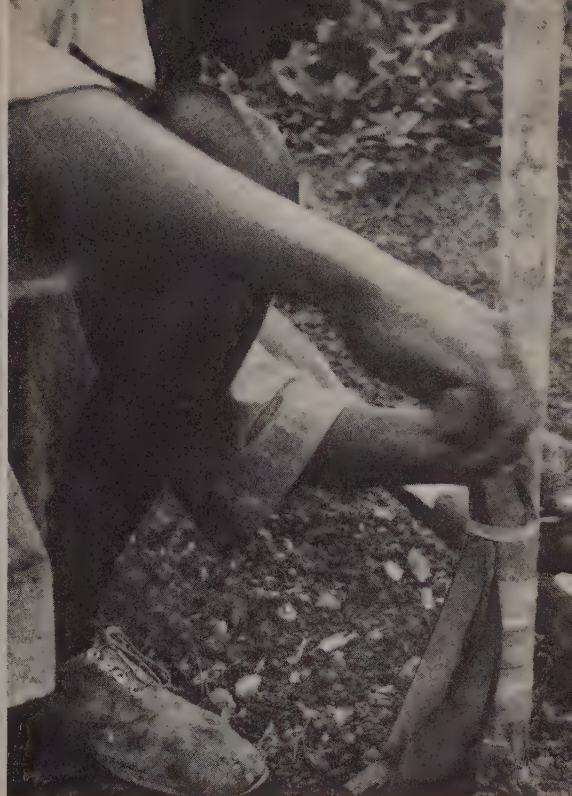
Preparing a bud cut from the bud-wood of a high yielding tree

varieties: by bud grafting and by cross-pollination. The former method is accomplished by cutting bud-patches in seedling trees three to four inches above the ground. A bud cut from bud-wood of high-yielding clones (a clone is a 'family' of trees which as seedlings were all grafted with the bud-wood of a single high-yielding 'mother' tree whose fertility they inherit) is inserted in the bud-patch of the seedling, which is then placed back in its original position and held there with waxed tape. Twenty-one days after, the tape is removed to see whether the bud is alive. If it is, the bark that covered the bud and still adheres to the lower part is cut off. A few days later the trees are again inspected and if the buds are well, the trees are cut off about two inches above the bud at an angle of 45 degrees so that rain water does not accumulate. The bud then begins to sprout at right angles and gradually curves upwards until it becomes the trunk of the new tree.

When the rubber trees are established, a leguminous plant is grown round them and



which is then grafted on the bud-patch of a seedling—



B. R. Goodfellow

—and bound into place with waxed tape over a layer of bark

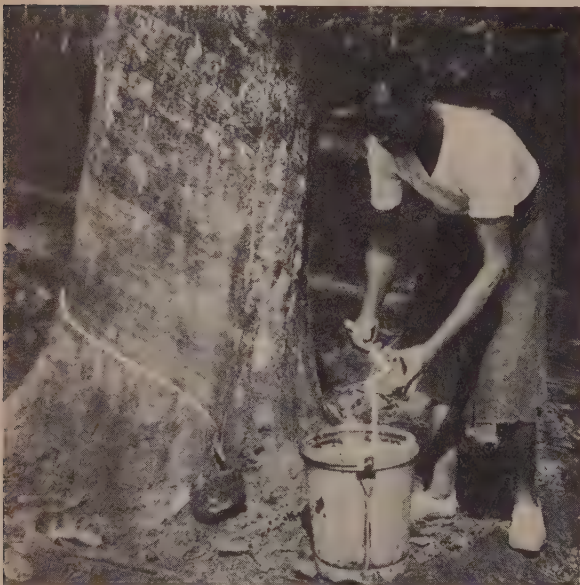
in a short time covers the planted area. This maintains the humidity of the soil and also checks the growth of weeds.

Rubber plantations usually cover a huge acreage. In Sumatra the Goodyear Company has its Wingfoot Plantation where it employs 6000 workers, mostly Javanese. In Brazil the Ford Company employs about 5000 workers on its plantations.

The tapper begins his work early. Taking his special knife, he makes a cut in the bark about two feet from the ground and at an angle of about 30 degrees. A small cup is then placed in position to catch the 'latex' as it drips from the tree. Latex is the white fluid contained in cells between the bark and wood of many plants, but only in *Hevea brasiliensis* is it found in profitable quantities. It would take a year for three seedling trees to drip enough *Hevea* latex (which contains up to 40 per cent more rubber) to make a motor-car tyre. At the end of the day the tapper collects the latex from the cups and takes it to be weighed. It is then poured into

a dilution tank, elevated so that the latex flows into the coagulation tanks below. Aluminium sheets are then dropped into slots with which the tanks are lined, and in a few hours the latex forms into tough sheets. The aluminium sheets are then removed and the sheets of rubber are hung on racks and put in smoke-houses to dry. Although usually exported in sheets, liquid latex is now being shipped in increasing quantities.

It is estimated that modern civilization uses rubber in nearly three hundred thousand different forms, and new uses are constantly being found for it. In modern warfare it now commands third place among the vital raw materials, ranking after steel and copper. In September 1939 Britain's first big war rubber order was for 3 million feet of fire-hose from the United States. Transport, one of the biggest problems which an army has to face, is rendered easier, quicker and more efficient by rubber, and speeds of over 50 m.p.h. are now attained, compared with 15-20 m.p.h. in the last war, largely



By courtesy of the Netherlands and Netherlands Indies Information Bureau
 When the bark of the tree is tapped a small clay cup is fitted to the trunk into which the latex drips. (Above) Emptying the cup. (Below) Weighing the latex

By courtesy of the High Commissioner for India



because all types of vehicles, from the light truck to the large-calibre gun, are mounted on pneumatic tyres. The possibility of puncture by bullet has been countered, and a tyre produced which, it is claimed, is unpuncturable. The principle of the invention is that should a bullet penetrate the rubber the interior construction will prevent the tyre from collapsing.

Collapsible rubber dinghies are now carried by most aircraft in such a position that they easily float free after automatic inflation from a cylinder of compressed gas. When the plane alights on the sea, the water flows into an inlet pipe which is under the machine and sets going the mechanism controlling inflation. Similar boats are also used for crossing rivers and lakes, in some instances sufficiently large to convey a light gun.

Another rubber device which has saved many lives is the de-icer equipment to prevent the formation of ice on aeroplanes in flight. In certain designs the equipment consists of rubber tubes protected by an outer covering of rubber and is fitted on the leading edges of the plane's wings. Alternate inflation and deflation of the tubes break up any ice that may form on the wings.

Metal petrol tanks, also, are covered with a coating of sponge or solid rubber, which while permitting the passage of a bullet, seals the hole made in the tank. Patents have also been taken out for bags of thin rubberized fabric to be used in place of metal tanks.

In the manufacture of explosives, the health and often the lives of the operatives depend upon their using rubber gloves, aprons and boots. The slightest friction might set up sparks, which in turn would cause an explosion. As a further safety measure it is now possible to obtain rubber flooring with a low electrical resistance which prevents the building up of static charges of electricity. As is well known, any non-conductive body, especially a dry one, when subjected to friction will develop a charge of static electricity. In contact with earth (in the electrical sense) the charge leaks away as it is formed, but if insulated from earth the static charge will build up and will attain a high value. If this highly charged body is approached by an earthed conductor, a charge passes to earth through the conductor

THE STORY OF RUBBER

and its passage is accompanied by a spark which can have serious consequences in the neighbourhood of explosives or air charged with inflammable gases.

It is not possible to refer here to all the uses to which rubber is put in time of war.

There are many forms of gaskets and buffers which play an important part in submarine, warship or aeroplane. But I hope I have said enough to show the importance of rubber in the successful prosecution of modern warfare.



An example of the finished product: vulcanized cushions and mattresses, much used in the United States, passing through a roller into a tank, where they are rinsed before being dried

Gypsy Fiddlers of the Plains

by Professor WALTER STARKIE

Of Europe's million Gypsies—not forgetting the Scottish Gypsies described in our pages last November—probably a quarter are found on the Hungarian Plains, where, true to the musical inheritance of their kind, they are famed for their fiddling. Professor Starkie has written many books about these wandering people, notably Raggle-Taggle, Spanish Raggle-Taggle, and Don Gypsy. In this article he reveals how he gathered material for his studies

THE first time in my life that I had occasion to meet Hungarian Gypsies was in 1919, in Italy. One day, after giving a recital for British troops in a Y.M.C.A. hut, I saw a group of Austrian prisoners loitering near the door. When I had finished, one of them begged me to show them my fiddle; they crowded round me, speaking excitedly in Magyar. Their spokesman, translating for them into French, told me that they were Gypsies and that they were lost without music. "Get me some wood, sir, for the love of God, any old packing-case will do; you'll see what we can make out of it." The Hungarian *Tzigan* is lost without a fiddle.

Gypsies they certainly were, those prisoners; their skin was as dark as mahogany and they were in complete contrast to the rest of the prisoners who worked in the camp. I got the wood for them, a couple of wooden cases, and I went on my way. Some weeks later, when I happened to pass through the camp again, I found those Gypsies equipped with fiddles, crude white ones they were, but they were played with such an infectious rhythm that there was hardly a soldier in the camp who did not feel his legs and feet tingling and tugging at him to dance.

Years later, when I visited the Hungarian plain on foot, I remembered my first vision of the Hungarian Gypsy who has music in his bones. To him the fiddle is a magic thing and, in accordance with his primitive lore, he weaves stories about its magic origin; its wood comes from a magic tree whose branches are haunted by invisible spirits. The music he plays upon it has more of the devil than the divine. For centuries these Gypsies have rambled over the Hungarian plain from end to end, playing the part of minstrels. When, about 1400, the Gypsies raggle-tagged into Europe they did not at first play the part of minstrels; they were vagabonds living from

hand to mouth, and the early chronicles tell many a tale of their sorceries and fortune-telling. It was their reputation for witchcraft that made them feared and even respected in Europe. We must never forget their Indian origin and their strange Indian language, which consolidates their brotherhood throughout the whole world. Being orientals they mingle with their wizardry strange incantations, and from the constant repetition of the chanted phrase comes the Gypsy spell, whether it works with magic Tarot Cards, black wax figures, or herbs.

Music became associated with their Shamanism and soon they began to use the songs and poems of the various peoples among whom they live and weave their sorceries. Hence the vogue of the *Tzigan* minstrel in Hungary, the Gypsy women singers in Moscow, the rapt *gitano* chanters of 'Cante Jondo' in the south of Spain.

When I roamed over the Plain in 1929, there was not a day I spent without undergoing this magic experience of music. Then I came to realize the truth of the Indians' attitude when they associate music with every season in the year, and give every one its special tune or 'Rag'. The wandering fiddler in Hungary, if he is a foreigner, must very quickly adapt himself to Magyar life. First of all, he must not only have his head well stocked with Hungarian melodies and rhythms, but he must have trained himself in the rhapsodic performance, with its slow melodic *lassu* full of restless notes followed by long pauses, repeated again and again, and then the *friss*, with its martial rhythm and the characteristic break, a kind of snap, which we get in the Scottish song 'Comin' thro' the Rye', all ending in the orgiastic tavern dance of the *Csárdás* with its manifold variations.

When I first went to Hungary I did not know a word of the Magyar language, hence



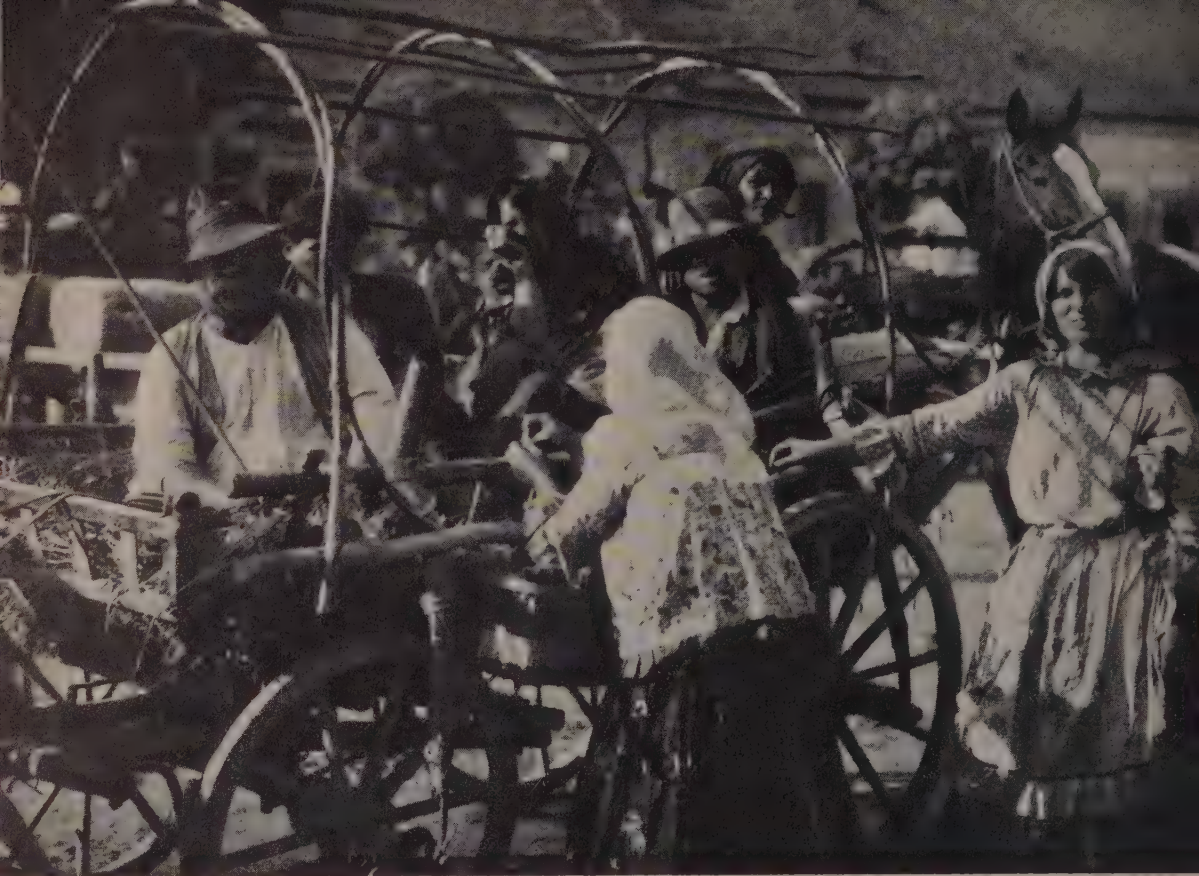
All photographs by Margit Kelen

To the Hungarian Gypsies the fiddle is a magic thing associated with their ancient lore and sorceries. He who will be master of it must begin young

everything had to be said in music, and it was necessary to evolve a special system in order to secure bed and food for a tune. Every wandering fiddler, like the Red Indian, always has his ear close to the ground and his nose to the wind, that, perchance, the sound

of singing or the scent of wine may warn him that a spree is nigh.

The Hungarian language has a pretty word, *mulatni*, which means to enjoy oneself with Gypsies. Music is the natural expression of the Hungarian in his moments of Dionysiac



On the way to the village fair, happy hunting-ground of the wandering Gypsies—

elation; the slow lassu followed by the rhythmic friss alternately tightens and slackens his nature and he lets himself go either way: at one moment, when relaxed, he becomes as languidly melancholic as an oriental: at others he rouses himself to rigid rhythms and bestrides his theme as he would a courser.

The happy hunting-ground of the wandering fiddler in Hungary is the fair, hence it is always thronged with nomad Gypsy fiddlers. I used, in company with these ragged minstrels, to descend upon a village on fair day, about five or six o'clock in the morning when the peasants clustered in their numbers round the booths and the air resounded with the bellowing of cattle, the grunting of pigs and the shrill crow of innumerable roosters. At that hour there is not a soul in the taverns or cafés, but it is just as well for the fiddlers to take up their position and plot their pitch. Then, when the fair is over, the peasants

jingle the coins in their pockets and their thoughts turn to the tavern and the spree. Their pockets are bulging; the old horse had fetched a tidy sum: the pigs and calves also; here they come, arm in arm with their wives or their wenches, towards the courtyard of the café. In the corner stands a group of scarecrow Gypsies caressing their fiddles. No sooner have the hobbledchoys called for wine, or *palinka*, than the leader or *primás*, of the Gypsy band strides up to the table, fiddle in hand, and starts to play. Wine flows, the *tzigán* fiddles, the farmer sings.

If you are a *primás* you stand and hold your violin about one inch away from the face of the fat peasant and gaze into his eyes, searching for the tune which will establish the bond of sympathy. If, however, he proves refractory, you play to the dark eyes of the girl beside him, for once you have captured her sympathy her cavalier will come



where young fiddlers chase potential clients from whom they may charm a few silver coins.
in the next page a band of Gypsy musicians is just striking up for the dancing peasants







There never was such a horse for sale as the Gypsy's!

tumbling after. Meanwhile, his companions follow the improvisations of the leader, sustaining the melody, prolonging the pauses, embroidering the flourishes and urging on his inspiration when it seems to flag. Gradually the peasant and the dark-eyed girl sink into a dreamy state as the elegiac sadness of the harmony envelops their senses. Many of those songs speak of past scenes of Magyar history, for were they not created to be an everlasting memory? With their wild harmony they suggest folk-poems. After a time the Gypsy fiddler quickens the pace, an inexorable force draws the peasants after the music, and they begin to stamp their feet to the rhythm. Once they bestride the theme they gallop in mind across the plain; every muscle in their body tingles, for the magic has begun to work. The Gypsy fiddler, meanwhile, stands like a statue, his copper face shows no emotion, his strange, dark, Hindu sorcerer's eyes hypnotize men and women and reduce them to submission. In this short moment of musical magic the Gypsy pariah becomes endowed with the superhuman power of the ancient bard who was next to the gods. Watch the peasant pull the bulging purse from his pocket; the Tzigan's covetous eyes gleam because he knows that before the end of the morning most of those coins will find their way out to the Gypsy camp on the plain. The peasant begins to caress the Gypsy, he kisses him, he makes him drink from the same glass as if he were a blood-brother, yet, earlier in the morning or later in the day, once the magic of *mulatni* has passed, he would spit at him, curse him and revile him as a lousy rascalion of a Gypsy, accursed in the sight of God and man.

Such is the scene that, in times of peace, one would witness daily in the Hungarian plain, in the humble café or in the baronial dwelling, where, at the banquet, the *primás* stands behind the host's chair ready to interpret every musical whim that comes into his head. Sometimes these wandering minstrels are part of a nomadic tribe that wends its way slowly through the wilds of Transylvania—The Land Beyond the Forest. That is to find oneself in an entirely different life. One is like the interloper who, in the forest, has trodden upon a fairy ring and feels himself bewitched, for this tribal life of the nomads

bears no relation to the humdrum life of the village.

Imagine the scene; the sun is setting and its rays cast a red glow over the plain; at the side are the blue Carpathian mountains and all around the fields are full of corn and maize. The carts of the Gypsy tribe are drawn up in the background and the horses and donkeys browse at leisure. Most of these nomads are dressed in dirty white tunics and tight-fitting trousers. Some of them wear, over the tunic, a short leather coat with fur on the inside, which served them when they were in the mountains. Some wear *sombreros* like Spanish Gypsies, and some the *astrakhan* caps of Eastern Europe. They all wear their hair very long, and some have matted beards, which give them a wild appearance. The women are bronzed and their faces are seared and crevassed by the weather-beaten life. Among the nomads a woman of twenty-eight is already old: hers is a hard life indeed for, in addition to organizing the economic life of the tents, she is in a constant state of pregnancy. Around the elders gambol hosts of naked brats, and various lean and mangy dogs snap their jaws carnivously at the sight of a well-fed stranger. The women have very little notion of what we civilized people call decency; some are naked down to the waist and busily give suck to infants, or else after attentive questing they ferret livestock in their children's hair.

If a stranger should stray uninvited into the Gypsy camp, for safety he should make straight for the old man of the tribe, the *Phuro Rom*, whose word is law in the tribe. With his protection it will be possible to satisfy the Gypsy-lover's curiosity, who, perhaps, with luck will copy down a small *paramish* or Gypsy story in his notebook. But do not imagine that it is an easy job to take down a Gypsy story when seated in a tent surrounded by hordes of naked children, naked-breasted women, mangy dogs and villainous-looking men. It is indeed a heart-breaking task and it is only possible to gather material after hours and hours of patient effort. Take, for instance, the sardonic old Rumanian hag; she is a store-house of stories and magic-lore; she can hypnotize you with her wizard eye, and point out a lurid past, and a still more lurid future in the palm of your hand, of which



Hordes of naked children swarm in the Gypsy camps. The old horse quite understands that their high spirits must be patiently borne

you yourself could never have dreamt. But you will never get that restless old witch to sit still and give you a chance of picking up a few crumbs of her lore. She will chant a few words of song, rolling her dark eyes and swaying herself to and fro, then some wild thought will cross her mind, and she will jump up, wave her arms and abuse the girls Mancsi or Mara, calling them lazy sluts, or else she will curse her grandson in obscene language before you drive her back to the famous song of 'The Making of the Bridge', the weird song of 'Foundation Sacrifice'.

It is no easy job to accustom oneself to sleeping in Gypsy tents; one really needs to be born to such a hard life, especially when it happens to rain. I should enjoy tent life if I were owner and master of the tent, ruling it with a rod of iron, but what can one do as guest and *gorgio* (stranger) into the bargain? In a hiker's camp sleep, to use Sancho Panza's

phrase, "covers one over like a cloak", for there is a sense of collective security. After the day's pleasant excursion we may float away into dreamland without a care in the world, but in a Gypsy camp the stranger, on his first night there, feels a number of petty anxieties and he runs over in his mind, as he lies awake, the possible dangers. What about the tribe? Will they obey the old man and respect the stranger? When the chief is snoring beatifically the watchful youths may rise from their couches and descend upon me while I sleep. Where is my fiddle? I must put it under my head as a pillow in case it might tempt their covetous eyes. I have a tiny wad of money in my trouser pocket, they might rob me either by subtle snake-like guile or else by smothered violence. Where is my stick with its inch of iron at the tip? My *callao* or silencer, as it was called in Andalusia. Such are the thoughts that prey upon the mind as one lies awake listening to the



*Kings of nature need neither knife nor fork but have an appetite
that many a more constitutional monarch might envy*

countless noises in the camp: the donkeys braying, the dogs, at intervals, baying disconsolately at the moon, the sadly amorous cats miaowing in concert. Then there are the various distractions caused by the insect tribes: companies of earwigs, advancing in extended order over my chest, the ingenuous and subtle stabbing of fleas whose function is to irritate national complacency and conceit in cleanliness (in Spain they are called *flamencos*, a word applied to Gypsy liveliness), *cada uno tiene su modo de matar pulgas*—(everyone has his own way of killing fleas)—everyone has his own way of dealing with situations. A thin-skinned man is one who has bad fleas on him, as they also say in Spain, so give him a wide berth because he exaggerates, for fleas, which are called ‘Satan’s horses’ in Rumania, are harmless creatures. Rather must I reserve my strength for the onslaught of the omnivorous bed-bug. When the dawn increases in brightness, and the green tints

blush to red, all those pests disappear like magic, and the camp soon begins to stir, for today there is a fair at the village of Arpas and it is time to draw out the fiddles, tune them and play them beneath the trees.

Such is the charm of the life of the Gypsies: did not Cervantes call them ‘kings of nature’? Modern life is cruel to such vagabonds because society has, as its main object, the reducing of everyone to the same level; why should humanity sell itself in slavery to the machine to become soulless robots having lost all desire for the life of freedom? I wish to rove again among the Gypsies, where there are still copper-smiths who make pans by hand, wood-makers who carve by hand and women who wear hand-embroidered smocks. I wish again to play in the Gypsy bands where one may improvise and ornament, according to the flash of the moment, the melodies that will make the people sing.





The Blockhouse

An Egyptian Memory

by CHARLES BRASCH

BEYOND our house there was one other; a square grey blockhouse that stood some way off on the stony Amarna plain, and seemed to mark the limits of the desert. Past it, there was nothing; one looked into a shoreless infinity where sometimes the figures of men or camels moved, immersed in silence, and where, far away, a ridge of shadowy hills increased the distance and the emptiness. There at night the jackals, or a solitary gazelle, came down from the hills and ventured towards the village, mingling their footprints with those of camels and men; the stars crossed and re-crossed; and water-green scorpions slept away the winter, warm underneath a stone.

The blockhouse, in which a desert guard lived, was the edge of this nothingness. There everything seemed to pivot; the world of living things went so far, and ceased; and upon it depended the vast desert beyond, dragging from it as from an immoveable anchor. Although it stood at random on the plain, without it there would have been no boundary, nothing to stay the advance of that soundless waste. Even our house, near enough to the cliffs and the fields where they ran together and the river lapped the foot of a precipice, might have been swallowed up then; the nothingness would have washed our walls, and its dissolving touch have crumbled with the sun-dried brick all measure, all distinction and shape.

The desert guard in his house kept more than he knew. His quarrelsome cringing

Climb out of the narrow valley of the Nile and you enter a rocky forbidding wilderness, haunt of the jackals and foxes that come down by night to the villages

dogs yapped at passers-by, yapped at the moon, would yap when there was nothing. They would chase after a stone thrown whizzing past them, they were so foolish, and leave the thrower free; but on their island in space they had cause for suspicion and bad temper. The pock-marked guard himself, with his rifle and his ammunition belt, was a shifty enough fellow, and perhaps he encouraged their meddlesomeness as a virtue in watch-dogs. But during the middle of the day they were quiet, and the waves of heat danced over a blockhouse that was hardly more substantial than a brief shape in the fire. Then, though it was least real, it was most of value. Everything lay dry and sucked of colour by the avid sun, which had withered the far ridge of hills like a puff of grass. The blockhouse quivered, but it was not blotted out; it had no more solidity than a vapour, but it did not abandon its post. Watching it with eyes that tired in the glare, one knew, however irresistible the sun seemed, that evening must come and that this attack too of the emptiness must flag and cease.

Yet somehow one wished the attack to succeed, the blockhouse to vanish without a trace, and that soft, that buoyant and enfolding emptiness to flow in and set one free upon its noiseless tide. It was emptiness and nothingness because indescribable; but they were not negative. Gazing morning and evening past the blockhouse, in that effortless still air before the heat broke and in the half-hour that ended with sunset, one knew that that emptiness, that silence, was the completest fulness and fulfilment. Perhaps the men who moved within it sometimes, crossing one's field of vision like abstracted symbolic figures, had tasted that rapture, and lost to the living world, journeyed for ever in a divine calm, exempt from death.

But for us there was no passing beyond the magic border of the blockhouse. One could walk, yes, into the desert, and for hours across wastes of sand to the distant ridge of hills; but one never reached that sublime nothingness which had covered, and would cover again, the very ground one trod. It only existed past the blockhouse, and because the blockhouse, that solid island in air, stood firm upon the plain and delimited it. The

nothing existed by virtue of the something; the nothing, which was everything, by virtue of the one, which was nothing.

In reality, there was not anything unusual about that tract of desert which appeared to us like infinite space. There were firm levels where for miles nothing grew, good for riding or walking, and crossed at evening by long darker streamers of shadow trailed from every grey stone. There were dry creek-beds, broad and deep as the greatest amphitheatre, where rare winter rains might send up a green flush of shoots, and even little pads of moss and tiny flowers. The cushiony grey-green thornbushes had flowers too, of a pale mauve, but they survived the hottest season and could conceal themselves against the sand like a faint stain of some duller texture. And there were miles of soiled and littered sand where the tops of crumbling grey brick walls were exposed to the sun, hardly above ground, or standing a few feet high to make a solid block of shadow; where potsherds, terracotta and reddish and biscuit-coloured, lay thick as leaves about some shapeless ruin against which the wind had drifted them. There at morning, before the dew was dried, one could tell from its darker shade where walls lay beneath the surface, and trace the plan of the houses and streets of King Akhenaten's city. Otherwise, and surrounding all these, only sand, in white folds stretching on, one could imagine, for ever, furred or laid even by the motion of the wind.

It was all open and plain enough for anyone who cared to explore it. The only treasures it possessed, except for what the ruins might hide, were the small smooth cornelian stones, and the olive-green stones with a skin as rich as polished ivory, that one could now and then pick up on its surface. Ancient roads crossed it in all directions, broad ways from which the stones had simply been swept into a small ridge along each side. But they did not seem made for man, and the footprints now crossed without following them.

Every year, a great train of camels passed that way, within a stone's throw of the blockhouse, on the months-long journey from their breeding grounds to the Cairo markets. Looking from a southern window, one suddenly noticed a movement far away on the

pale slopes of the desert; then it became a dark file, half floating through haze; growing larger, but silently, and unaccountable in that barren ocean of space. Finally taking shape, it still grew in size, as though it must soon become monstrous and darken the air; but once freed from the waves of heat, appeared normal. Long before it could be heard—and its noiseless approach was for some reason strangely disturbing—the dogs at the blockhouse had set up a barracking welcome. But their barks seemed meant equally to convince themselves that they really existed, and were not submerged in the utter stillness of the plain. They were not convincing. How lost and helpless, one felt, as each bark died without an echo, swallowed in the receptive unruffled air. Nor were the camels, nor even their calves, impressed. Long weeks of marching had mellowed their bad temper into something like resignation, and they ignored the yellowish curs—wolves, probably, only a few generations back—that ran up and down insulting them, and offering to snap. The cameleers too were indifferent; would salute the guard if he came out of his house to greet them, but distantly, sunk in prospects or daydreams into which nothing that happened by the way could

break. And silenced also, maybe, by the silent wastes through which they journeyed.

Clamour followed now for the next few miles. Hearing the noise of their kind, dogs would gather from the fields and take up the cry, lift their heads and yap and snatch as the seemingly train shuffled on. The dust and the cries passed our house and persisted along the groves and by the river until echoes came back from the approaching cliffs. But there the dogs ceased, for the fields had ended; and those from the blockhouse, who would not stray far outside their own territory, had already returned to their shade, and slept.

Beyond it, once again nothing. The camel tracks led back out of this world, past the barrier, and far into that wide emptiness. It was the outside of the world, a place where the seeds of things hung formless in air awaiting their creation. To gaze into it was to be silenced with expectation; almost to hear winged legions of the future slumbering there, in that brightness and swimming haze. And at its edge stood the square plain walls of the blockhouse, watching so that nothing should stir before its time, nothing be betrayed. It was like a boundary stone whose presence inexplicably caused the emptiness of space to bear.



Paul Popper

A King comes to Thailand

by J. E. L. PEPYS

The sixteen-year-old King Ananda of Thailand (Siam) paid his first State visit to his country in 1938. Mr Pepys, as private tutor, had unique opportunities of watching the celebrations which followed his arrival in Bangkok



E.N.A.

WHEN, in November 1938, H.M. King Ananda of Thailand paid his state visit to Bangkok, I accompanied him as private tutor. In the intervals of daily lessons at the Palace, court ceremonies, mass rallies of youth, and the inevitable club life and night life led by the European community, I found ample time to study the strange contrasts of rich and poor, new and old, gaiety and squalor, which strike one on all sides in this amazing little kingdom, and I came away with many precious memories of a kindly, hospitable, care-free people dwelling in a fairyland of colour. For Thailand is a country of strange contrasts and of bright colours.

My first glimpse of Thailand was from the deck of the battleship which proudly carried King Ananda up the river to the capital. This was his first visit since he had been proclaimed King three and a half years before. His people were wild with joy. All along the banks of the Menam Chao Phya, where the swampy forest comes right down to the water's edge, villages at intervals glided into view, with little figures in brightly coloured clothes lined up on rafts and floating houses and huts on piles, waving flags and cheering "Chai-yo! Chai-yo!" in greeting to their King.

At Paknam the royal cortège of warships halted beside the floating temple for the King to light ceremonial candles and perform traditional rites before passing upstream to Bangkok. A crowd of river-craft of all kinds had come downstream to meet us here and clustered round the battleship: yachts, motor-launches, tugs, taxi-boats, sampans and canoes. Nearer and nearer they came, their excited occupants straining to catch a first glimpse of the boy-king whom few of them had ever seen before; sirens screaming, people cheering, flags and rattles waving. His Majesty appeared on deck. The noise redoubled, and followed us unceasingly along the meandering river to Bangkok.

It was difficult to tell where the city began. The wooded swamp gave way to luxuriant gardens, the gardens to houses; then rice-mills, 'go-downs', jetties — crowded with people. Everywhere people were pushing and jostling their way to the water's edge to see and cheer the King. The Memorial Bridge was up to let us pass. The five tall towers, or *prangs*, of the Temple of Dawn pierced the sky on our left. On our right the lovely spires and pinnacles of Wat Poh rose above coloured gabled roofs. Slowly we



E.N.A.

The young King, on his first State visit to Thailand, passing through the streets of his capital

steamed past the Grand Palace and the Temple of the Emerald Buddha to the Royal Landing Stage.

There was a solemn silence as the battleship drew close. A flight of steps, clothed in crimson carpet, led down through a serried mass of officials in white uniform, waiting with upturned faces, towards a pavilion hung with golden flags. A royal bodyguard of troops in ancient costume were lined up beneath the trees. A band was ready with ceremonial conch shells, trumpets and drums. They struck up the National Anthem as the King appeared on deck, his small figure resplendent in white coat, scarlet trousers, saffron sash and golden sword. Beneath the pale purple umbrella of royalty, he walked down the steps and set foot on the soil of his own country.

The colour and pageantry of the King's arrival, and the royal procession which followed, seemed to me to be typical of the Thai's powers of display and picturesque appeal. Living in a land where the sun is always bright, they set great store by colour. Ordinary everyday clothes, for instance,

strike one immediately by their colour. The normal dress for men is a white button-up coat worn with white trousers, European fashion; or, more properly, with a coloured silk *panung*. This graceful garment is one long piece of silk, about ten feet by three, which, when wound round the waist, twisted into a tail and tucked up between the legs and fastened in a belt behind, has the appearance of a pair of magnificent plus-fours. The older men wear their panungs rather tight and high up on the leg, showing bare backs of knees above their white stockings. The young bloods wear them longer and looser, which gives them added height and smartness. Originally a special colour was set apart for each day in the week. Now that custom has lapsed, and a wide variety of reds, pinks, blues and greens may be seen on any one day, the royal blue of Government and palace officials always predominating.

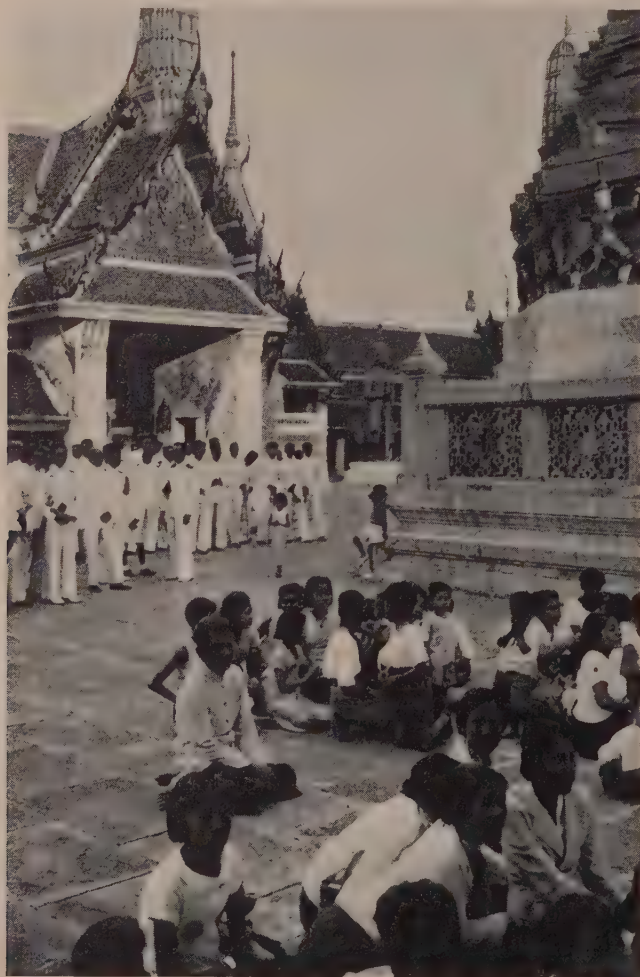
Peasant women wear the panung too; rather fuller and less gracefully than the fashion for men demands. With it is worn the *pahom*, a kind of bodice which comes up under the arms, usually white. Most young girls,

however, now follow the fashion of the rich and wear coloured blouses with a folded Thai skirt, a long tight narrow affair, very beautiful when properly worn. In the same way, boys and youths usually wear sports shirts and shorts or white trousers during the day, reserving the more expensive and luxurious panung for the evening.

After the royal procession was over, when the crowds broke up, I sat in an upper window of a tall Government building, watching the

clothes and colours of the people in the streets below. To me, having just set foot in Thailand for the first time, this new spontaneous procession was of far greater interest than the elaborately staged show which all these people had collected to see. There below me passed all the individual elements of the great cosmopolitan population of Bangkok; shifting, swarming particles of form and colour. Old women with short hair, black teeth, bare feet and panung; younger women with babies supported on one arm; groups of laughing girls with black bobbed hair, bright blouses and skirts; little boys with close-cropped heads and light-blue shorts; young men in white suits and no hats; old men in button-up coats and panung. Chinamen in loose silk trousers, their womenfolk in trousers too. Indians with shirts outside their trousers, other Indians with shirts inside. Priests with yellow robes and shaven heads; people selling balloons; beggars; families packed into cars; tricycle-taxi drivers soliciting for fares; knots of khaki-clad policemen trying to control chaos. Even in the canals alongside, a congested mass of crowded barges, sampans and canoes. Everywhere, in all directions, a continuous moving stream of colour.

During the next few days and weeks I had plenty of time to study the life of the city in more normal mood. Many curious aspects strike the visitor at once. The immense distances,—it took me half an hour to get by car from the Oriental Hotel to the Chitralada Palace for the King's lessons every day. The congestion of traffic, mostly tricycle-taxis: a very handy and cheap mode of travel, both more comfortable and more democratic than the bumpy



J. E. L. Pepsys

In the courtyard of the temple of the Emerald Buddha, the people wait to prostrate themselves before their King. Behind them stand officials of the Royal Household



J. E. L. Pepys

Wat Arun, the porcelain temple of Dawn. As the royal cortège steamed up the river on arrival in Bangkok, the pavilions and boats at the foot of the temple were crowded with brightly-dressed people



Paul Popper

Guardian giant at one of the tiers of Wat Poh, the largest temple in Bangkok. This old stone man is of Chinese design and has stood here in the sun for nearly 200 years

rickshaw. The contrasts: wide avenues, shady trees, palatial houses of the rich; narrow lanes, squashed-up shops and hovels of the Chinese quarter in the centre of the city. The colour: everywhere the glorious tiled roofs and gables of the many temples towering above the drab houses in the streets. Lastly, the intricate network of canals. Bangkok has pushed out eastwards from the 18th-century city walls, her new wide roads usually running beside the original canals. In some cases canals have been filled in to make roads. On the west bank, however, few roads have been made. There the amphibian life of old Siam goes on as it always did; canals lined with floating houses and thronged with boats, as congested in their own way as any of the narrow city streets on the other side of the river.

Above all, however, the glory of Bangkok is her *wats* or temples. During my first two weeks in the city, before the King's lessons began, I spent many a pleasant morning 'watting' with my charming Royal Household guide. There are more than 300 *wats* altogether in Bangkok, and their precincts cover one-fifth of the area of the city. Within their enclosures colour and fantasy run riot.

The most gorgeous and fantastic of all is Wat Phra Keo, the Temple of the Emerald Buddha. I first saw it when the King made his public Declaration of Faith. I arrived at the temple courtyard to find the public patiently awaiting the King's arrival, squatting on the marble pavement, surrounded by a crowd of officials in white uniform. Men of rank—royal princes, generals, ministers—were ranged in rows round the main temple building where the ceremony was to be held. All around rose pillars of porcelain and coloured glass and gold, the golden *prachedi* or stupas, the blue, green and golden roofs with their decorated gables, and the enormous giants or Yaks, with blue or green faces, guarding the gates.

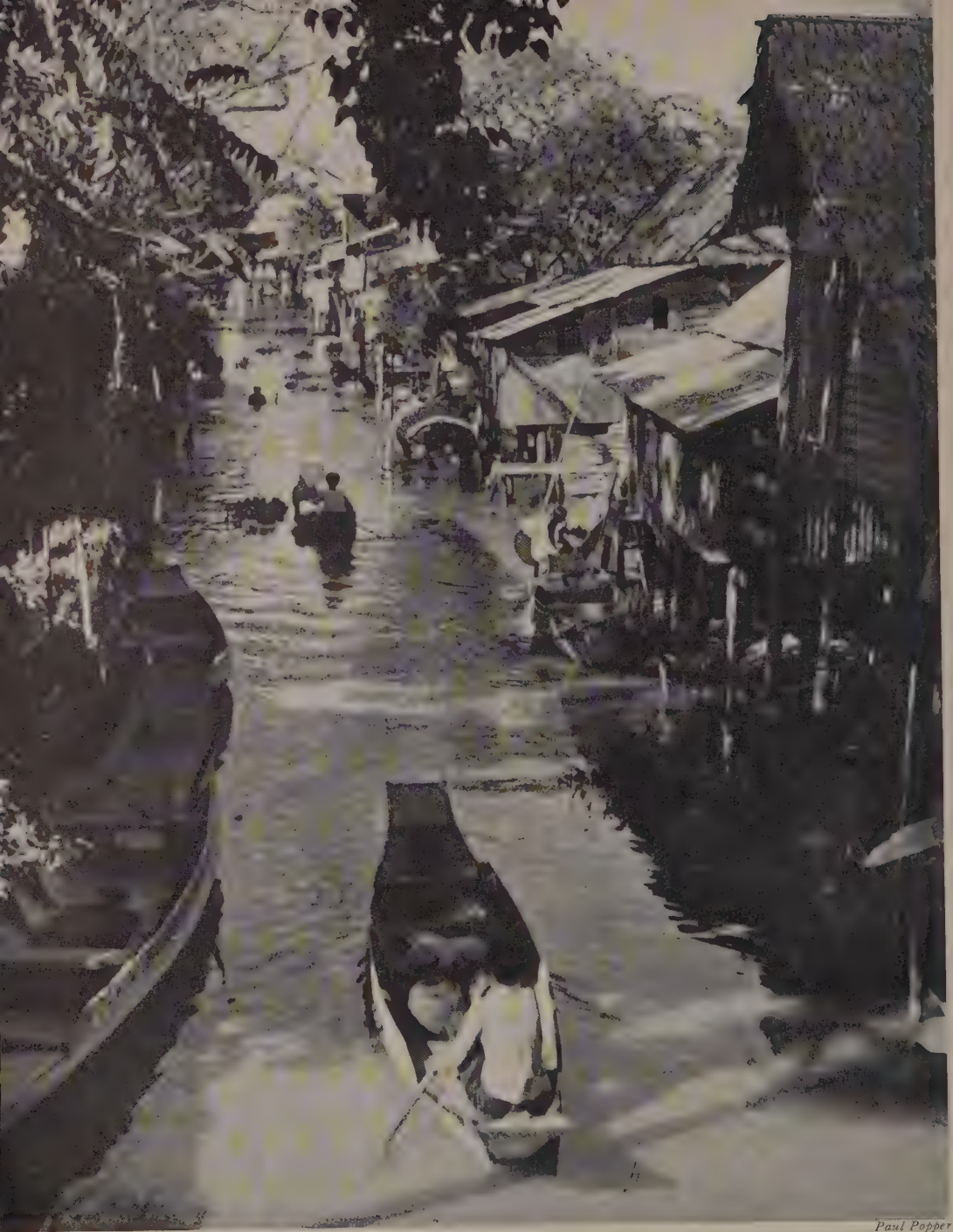
Presently bugles were heard and the people were hushed. The King's bodyguard appeared, marching up the courtyard; a double row of royal pages. Then the King's umbrella, carried by a page. Then, dressed all in white from top to toe, the King. The officials bowed, the people prostrated themselves, a score of cameras clicked, and His Majesty

disappeared into the dark interior of the temple. Soon the priests filed out, barefoot, carrying sacred candles and huge fans. Down the steps, across the courtyard, then slowly out between the grinning Yaks,—a curling line of yellow robes and waving fans. Outside the gate beggars were sitting waiting for the crowd.

After the ceremony I wandered around the temple with my guide. My impression of the main building, or *bôt*, was that of a mass of glittering blue and gold pierced by rows of decorated windows, surrounded by stately columns and crowned by a dark-blue gabled roof edged with red and gold. The effect was dazzling. I looked upwards, as in a Gothic cathedral one looks upwards, following the columns to the overhanging eaves where red snake-like flames curled towards the sky and tiny golden-leaf-like bells swung and tinkled in the wind. All around us, on marble terraces and platforms, were statues, fountains, steps, walls, gates, shelters, belfries and pagodas. Beyond, glimpses of more gabled roofs, russet and green, and golden spires. A *prachedi* covered with tiny gilt tiles looked from a distance like a pagoda made of solid gold. Within the dark interior of the *bôt*, upon a great golden altar rising tier upon tier above images, umbrellas, and candlesticks, the Emerald Buddha sat enthroned on high.

This precious image, cut from a solid piece of jasper, originally came from India by way of Ceylon. After many wanderings, captures and recaptures—like the Ark of the Covenant of the Children of Israel—it was brought to Bangkok, where it is now held in great reverence; the mascot of the present dynasty, the jewel of the Thai.

I saw many other temples, each with its own special atmosphere. There is the shining white beauty of Wat Benjamabopitr, the marble temple built by King Chulalongkorn, the present King's grandfather; the untidy grandeur of Wat Arun, the porcelain temple of Dawn; the scattered immensity of Wat Poh, where is a gigantic sleeping Buddha splashed with tiny patches of gold-leaf stuck on by the faithful; the clean majesty of Wat Sudat; the tiny perfection of Wat Rajbopitr. All, however, exhibit a curious contrast. Beside the garish splendour of polished tiles and coloured



Paul Popper

Bangkok, city of canals. Half the population live in houses on piles, shopping by canoe in the floating market—where one finds the old Siam twenty yards from tram-lines and air-cooled cinemas

glass and gold leaf, the priests themselves, in their simple yellow robes, live in the humblest of quarters; rows of tiny whitewashed cottages, like cowsheds. One feels that the priesthood is genuine, and in its way a power in the land. Most men become priests for two or three months in Thailand. Most therefore have some training in the Buddhist Law. This affects the character of the people and their conduct: the Thai are essentially tolerant, care-free, kindly.

Though Buddhism is the official religion of the state in Thailand, there is complete liberty of worship. There is a large Mohammedan minority, especially in the south, and more than one-fifth of the population of Bangkok is Chinese. Many of the ceremonies held throughout the year are Brahmin rather than Buddhist, though now a number of these are allowed to lapse as serving no useful purpose in a modern nationalist state.

One of the most picturesque and curious ceremonies I attended was the Cutting of the Top-Knot. Thai children wear their hair very short except for one strand or lock, which is wound round and tied on top of their heads—the top-knot. At the age of nine or ten this top-knot is removed, and the child has taken one more step towards manhood. The cutting of the top-knot is a religious and social ceremony of great significance, roughly corresponding to confirmation in the Christian church. Sons and daughters of princes usually have a ceremony to themselves, when, after due instruction, they are ready for it. The children of the general public, however, go *en masse* to the Brahmin temple early on a certain day in the year and all have it done together. A very charming sight it is to see the little temple packed with smiling children, one stream entering at one door, with top-knots duly garlanded and still intact; another stream issuing into the courtyard from another door with top-knots gone, clutching their little locks of hair happily in their hands; inside, four or five Brahmins in long white cloaks busy cutting top-knots with enormous

scissors and handing some of the strands to the excited children. I noticed a number of little girls with bobbed hair who went through the ceremony just the same; one lock was snipped off and handed to them like the rest.

About 700 children had their top-knots cut that morning. Outside in the courtyard afterwards professional barbers and fathers and mothers were busy shaving their children's heads, while sisters and aunts and cousins were cooking breakfast. Photographers were busy too, for it is a great day in a child's life. Outside, by the gates, an avenue of wretched beggars waited, stretching out their arms and holding up tin bowls; mostly very old and very thin, some blind, some leprous. One day, years ago, they too had their top-knots cut.

* * *

Thailand is now a modern civilized state, with hospitals, schools and universities, all of which I was taken to see. But you still find contrasts, and you still find colour. Outside the up-to-date, air-cooled cinema, mangy pi-dogs, with their ribs sticking out, snuffle in the gutter. If you walk in the spacious parks, well laid out, with artificial ponds and dainty bridges over streams, you suddenly get a whiff of the smells from the stagnant *klongs*. At the end of a broad avenue lined with shady tamarind trees and spacious houses, you suddenly come upon a quarter of the city where wooden shacks are so closely packed that big fires are a quite common occurrence. On the one hand you have your large stores, your neon-lights, your trams, your restaurants; on the other hand you have the floating market, the huts on piles, the canoes, the sampans; the same old water-life which you always had in old Siam and always will have in modern Thailand.

But, whatever happens in the future, on both sides of the picture there will always be the colour, the gaiety, the extravagance of the temples, the charm of the people's clothes, and the engaging grace of Thai manners.

A Tale of Travel

by LUCIA MOHOLY

On July 5, 1841, the first cheap excursion arranged by Mr Thomas Cook ran from Leicester to Loughborough and back—a distance of 24 miles in all. The gradual development of organized travel, from the early religious pilgrimage to the modern industry for providing foolproof trips of every sort for every kind of person to every part of the world, is briefly outlined in the following article

"I THINK there is a fatality in it—I seldom go to the places I set out for," said the Sentimental Traveller, Laurence Sterne, when he abandoned his plan to call on Monsieur le Duc de C. . . . in Versailles. He followed the footsteps of Montaigne who said that he never set out for anywhere particular, that the only places he wished to avoid were those to which he had been before, or where he had to stop; and that he felt as one who was reading some delightful tale and dreaded to come upon the last page.

Bacon's opinion that "Travel, in the younger sort, is part of Education", was very popular among the upper classes of the 16th, 17th and 18th centuries. Young men of standing, and prospective civil servants in particular, went abroad to complete their education and widen their outlook (with, usually, a romantic love story in the background). A tutor, or a courier, or both, were chosen for companions, with a servant or two to look after the luggage, which included beds, canteens, saddles, pistols, provisions and sometimes coaches. Three thousand pounds was considered just enough to "see all Italy in a gentlemanly way". Some managed on three hundred, or less if they travelled by stage-coach and diligence—or walked, as Shelley proposed to do, and Wordsworth did.

With all the money spent on a journey, the inns were uncomfortable, the landlords suspicious, the turnpikes tiresome, the sea dangerous, the roads threatened by robbers, and the night's rest disturbed by vermin.

Travelling in those days was a privilege of the well-to-do. It was a purely personal and unorganized enterprise, and everyone had to take the rough with the smooth. "Comfort must not be expected by folks who go a pleasuring", wrote Lord

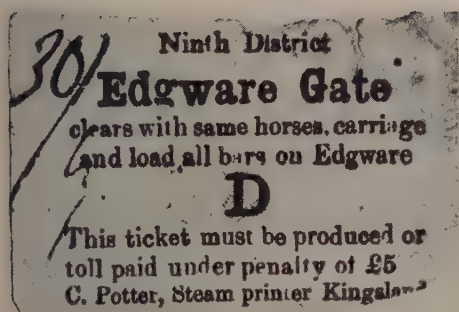
Byron to his friend Francis Hodgson from Lisbon.

* ————— *

Travel for educational purposes had been part of the social and political system in Roman and early Christian times. Philosophers and missionaries—St Paul among them—spent years touring the Near and Middle East, teaching and preaching. When later, in the Middle Ages, the first Universities were established in western Europe, the exchange of students and lecturers produced a steady flow of travellers to and from those centres of learning. It was a widespread, and at times a collective, movement, though it was not organized travel in the modern meaning of the word.

The earliest organized travel arrangements on a large scale have for many centuries been linked up with Pilgrimage. Hostels and hospices for accommodating and feeding large numbers of pilgrims in places of worship, East and West, were mostly run by laymen under the authorization of the churches. The Septimerpass, the oldest hospice in western Europe exclusively designed for pilgrims, dates from the Carolingian period, and the Hospice of the Great St Bernard from the 10th century. Associations were founded to assist pilgrims bound for the East, and books were written describing the journey to the Holy Land, and passing on information regarding roads, pilgrim-galleys, times of sailing, details of religious procedure and other particulars. The first important book on the subject, *De Locis Sanctis*, published towards the end of the 7th century, was compiled on the island of Iona by Bishop Arculf, who had visited Jerusalem, Damascus, Tyre, Constantinople and Alexandria.

Up to the 14th century narratives of travel appear to have been a mixture of authentic



Rischgitz Studios

From the middle of the 18th century for a hundred years, travellers in England had to pay toll on turnpike roads. (Above) A toll-gate ticket. (Right) When travellers made use of hired horses they were issued with a 'day ticket' which they gave up at the first toll-gate and received an 'exchange ticket'



and imaginary experience. A journey was a gigantic adventure. Every report, however fantastic, found a credulous public. John de Maundevile's *Voiage and Travaile* achieved greater popularity than many others. It was published between 1357 and 1371, and has for a long time been accepted as a genuine account of his journey among people "that have no heads, and their eyes be in their shoulders. And their mouth is crooked as an horse shoe and that is in the midst of their breast" and "folk that have the lip above the mouth so great that when they sleep in the sun, they cover all the face with that lip".

With the progress of learning and exploration, and the extension of trade and commerce, information about foreign countries became more realistic. In the 16th and 17th centuries the great Trading Companies, the Merchant Adventurers, the East India Company and others, opened up routes between all parts of the world for the international exchange of goods. Their lines of communication worked according to plan, if not to a perfect schedule. They not only carried goods and commercial intelligence, but promoted geographical and ethnological knowledge.

A new class of traveller joined the Student, the Pilgrim and the Merchant in the 18th century: the Scientist of the Alexander von Humboldt type. Together with his opposite, the Romantic, the Sentimental Traveller, they carried on the tradition to the early 19th century.

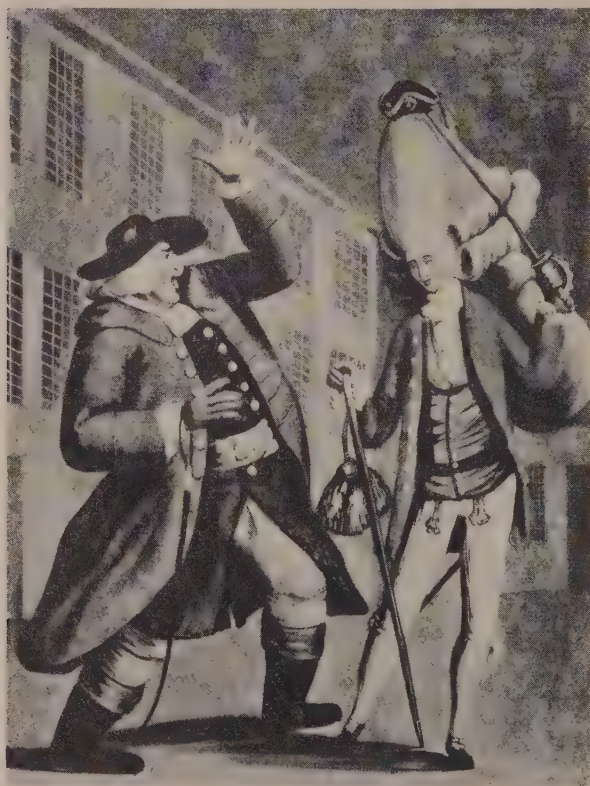
The same publisher, John Murray, who in 1811 bought the copyright of *Childe Harold's Pilgrimage*, Byron's description of the 'Gorgeous East', published the first reasonably trustworthy handbooks for travellers, earliest sign of the modern tourist vogue.

The publication of these handbooks coincided with the appearance of the first passenger steam railway in the United Kingdom. Railway enthusiasts believed that they were serving a good cause by playing off their recently acquired knowledge of foreign countries against the new invention. "Compared to it", they claimed, "how shabby a structure would be the celebrated Roman Wall, or even the Great Wall of China. As for the Egyptian Pyramids, they are merely uncouth monuments. . . ."

Sober minds realized that the new means of locomotion promised an unheard-of extension of travel and allowed a reduction of fares to



By courtesy of Messrs. Frank T. Sabin



*Eighteenth-century travellers.
(Above) The outward journey: an
impression by Rowlandson of a
Channel crossing in fair weather—*

*—(left) Strange home-coming of a
young gentleman just returned from a
'Grand Tour' of the Continent to the
arms of his astonished father: "Well-
aday, is this my son John?"*

British Museum



Rischgitz Studios

When Byron and Shelley visited Italy they frequently drove in a calesso, a popular vehicle in common use there in the 18th and early 19th centuries

meet the average pocket, provided that a sufficient number of passengers was assured. This idea led to a scheme carried out by the Newcastle and Carlisle Railway: when a bazaar for church building was held in Grosmont in August 1839, the fares were reduced on that occasion from ninepence to sixpence, and from two shillings and three-pence to one shilling and sixpence. The result fully justified the experiment. A considerable reduction of fares was granted in May 1840 to the travellers from Carlisle who went to see the Polytechnic Exhibition at Newcastle. In June 1840 the Leeds Mechanics' Institute travelled to York by the Leeds and Selby and the York and North Midland Railways for half the normal rate, including tea at York. This was the first instance of an all-in arrangement.

The next and most widely known attempt on these lines was a special train run from Leicester to Loughborough by the Midland Counties Railway on July 5, 1841. A reduced rate of a shilling per head was offered to those attending a meeting of the South Midland Temperance Association. This plan

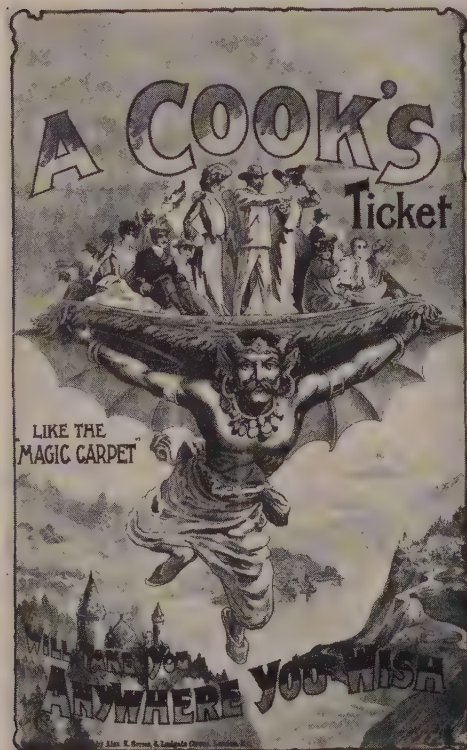
had been put forward by Thomas Cook, Bible reader and Secretary of the Association, who wished to make the meeting a success. Five hundred and seventy people travelled in open carriages, nicknamed 'tubs', and a well-attended meeting rewarded Mr Cook's initiative. Encouraged by the result, he arranged further excursions in different parts of the Midlands, mainly for temperance societies and children's welfare organizations. In 1851 special trains carried 165,000 passengers to the Great London Exhibition from various parts of the country.

Cook's enterprise met with great enthusiasm from all prospective clients in the middle classes, and with harsh criticism from their sophisticated fellow travellers. Cornelius O'Dowd (Charles James Lever) raged in *Blackwood's Magazine* against the "Continental bear leader" who conducts "tribes of unlettered British over the cities of Europe", and many readers seem to have shared his views on the "Cookites". Edmund Yates in a friendly appreciation of the new scheme in *All the Year Round*, then edited by Charles Dickens, made an attempt to analyse Cook's clientèle in May 1864.



(Above) A passenger train running between Liverpool and Manchester in 1833. When the carriages were open, they were nicknamed 'tubs'

(Below) Compare this 20th-century poster of a modern travel agency with the handbill issued a hundred years earlier (opposite), which—



By courtesy of Thomas Cook & Sons

The shorter excursions in England [he says] attract tradesmen and their wives, merchants, clerks away for a week's holiday, roughing it with the knapsack and getting over an immense number of miles before the return. Swart mechanics are by no means the worse informed, and are generally the most interested about the places they visit. As to Swiss excursions, the company is of a very different order. The Whitsuntide trip has a good deal of the Cockney element in it, and is mostly composed of very high spirited people, whose greatest delight in life is "having a fling", and who do Paris, and rush through France, and through Switzerland to Chamonix . . . and rush back convinced that they are good travellers. From these roysterers the July and September excursions differ greatly. Ushers and governesses, practical people from the provinces and representatives of the better style of the London mercantile community . . . all travel as if impressed with the notion that they are engaged in fulfilling the wishes of a lifetime. . . .

They were indeed fulfilling the wishes of generations. Oberon's dream was coming true:

We the globe shall compass soon,
Swifter than the wandering moon.

Conducted Tours eliminated dangers, provided comfort, and cut down expenses. Incidentally they also cut down some of the intimacies and charms of individual travel and confined 'Terrestrial Paradises' to a few very remote corners of the world.

Cook's travel arrangements, which during the first fifteen years had been restricted to the British Isles, were extended to the continent of Europe in 1855, the year of the Paris Exhibition. The Circular Tours, beginnings of the European Touring System, were initiated in the following year. Later exhibi-



Rischgitz Studios

tions in Manchester, South Kensington, Vienna, Philadelphia and elsewhere, again attracted Cook's attention, and the service soon covered Europe, America, Australia, Egypt and Palestine. 'Tours Round the World', gigantic adventures in the past, were carried out annually from 1872.

On various occasions Cook's were employed by the Government. In 1882, on the outbreak of Arabi Pasha's insurrection, they were commissioned to convey Sir Garnet Wolseley to Egypt, and were called upon again in 1884, on the occasion of the Nile Expedition for the relief of General Gordon at Khartoum. In 1886, at the request of the Marquess of Dufferin, Viceroy of India, they reorganized, with the Government, Mohammedan pilgrim traffic from India to Mecca and Medina, and received the thanks of Sir John Gorst, Under Secretary of State for India, for their "practical and useful strengthening of British power in the East".

When in 1898 the German Emperor made his vainglorious tour of Palestine, Cook's had to provide 1430 riding horses, mules and pack camels, 116 landaus, carriages and baggage carts, 6 special trains, 300 tents, 800 muleteers and 290 camp servants for the party consisting of 213 persons. The pomp and ceremony would not have given complete satisfaction without a huge gap being knocked out of the City Wall of Jerusalem, to allow an unhampered display of the imperial procession past the Tower of David.

In 1900 Cook's were responsible for Queen Victoria's travel arrangements on her three weeks' visit to Ireland. Since the death of the Prince Consort, the Queen had left Balmoral only on rare occasions and for very

—advertised cheap excursions by mail coach, run by 'two industrious Englishmen', to the battle-field of Waterloo

FIELD OF WATERLOO.



NOTICE

ENGLISH & AMERICAN TRAVELLERS.

Two four-horse Mail Coaches start from **BRUSSELS for WATERLOO and MONT-ST-JEAN**, every morning.

PRICE 5 FRANCS THERE AND BACK.

The **WARRIOR**, at 9 o'clock, from the *Hôtel de l'Université*, *Longue rue Neuve*, and The **VICTORIA**, at 10 o'clock, from the *Hôtel de Saxe*, *Longue rue Neuve*; taking up Passengers at the *Hôtel de la Grande-Bretagne*, *Place Royale*. The Coaches return from Waterloo in time for the tables d'hôtes at half past four.

EXTRACT FROM BRADSHAW'S CONTINENTAL GUIDE.

* The expense of a party going to Waterloo was formerly 27 francs, but this has been reduced to a more reasonable price by the spirit of English enterprise. Instead of the close *voiture*, or lumbering carriage, there are now two English four-horse Mail Coaches running daily between Brussels and Mont-St-Jean on the field of Waterloo. Fare, 5 francs there and back. And we strongly recommend travellers to secure their places, for the day they wish to go, immediately on their arrival in Brussels, at Saffell's, N° 17, rue Villa Hermosa, *Montagne de la Cour*.

* These conveyances render a visit to Waterloo an agreeable and cheap excursion, but as the interview with the parties who formerly let out vehicles for Waterloo, these coaches are opposed by hotelkeepers, waiters, commissions, etc. We therefore think it right to warn our readers, that if they mention "Waterloo," attempts will be made to dissuade them from going by the Mail Coaches, though we hope successfully, as these conveyances are decidedly the best, being respectfully conducted by steady English coachmen; and considering that the proprietors are two industrious Englishmen who have established these coaches for the convenience of travellers, we think they are entitled to the support of their fellow-countrymen.

BOOKING OFFICES IN BRUSSELS:

Saffell's Livery stables, 17, rue Villa-Hermosa, *Montagne de la Cour*.

Copper's Livery stables, *Esplanade Port de Namur*.

Bailly's Tavern, *rue du Musée*, 14, etc & porter on draught.

N. B. Please copy one of the above addresses.

By courtesy of Mr Walter T. Spencer



Rischgitz Studios

Queen Victoria opening the Great Exhibition in Hyde Park in 1851. This was one of the earliest occasions when special train services were organized for sightseers

short periods. At the age of 81, and in spite of being a bad sailor, she wished to show her appreciation of her Irish regiments' gallantry in South Africa, and agreed to undertake the rigours of the crossing. This visit was one of the last public actions of her life.

* * *

In the 20th century organized travel has been taken for granted, as are newspapers, railways and telephones. Travel agencies of all denominations have established themselves in every country. Their clientèle, formerly "clerks and tradesmen, ushers and governesses", as described by Yates in 1864,



Rischgitz Studios

Travelling in crowds by land and sea in the 'sixties: (above) W. P. Frith's well-known picture of a London railway station; (below) the arrival of a Channel steamer in Boulogne harbour



Rischgitz Studios

and referred to by unkind contemporaries as "very ancient maids and still more antique bachelors", has since been drawn from all ranks of society.

No more startling illustration can be found of the development of what has come to be known as the 'tourist trade' in the years between the wars, than the fact that certain small countries depended on the money spent by visiting foreigners as others depend on the export of meat or grain; cabinets fell when the tourist traffic languished, and the sabotage of revolutionary groups was directed as much against the luxury hotels and places of entertainment as against the factories and power-houses.

The growing demand, before the war, for holiday and pleasure trips induced professional groups, industrial enterprises and public institutions to set up travel departments of their own. Provisions were made for people of all classes and all ages who wished to spend a holiday, planned ahead, in town or country, hills or seaside resorts, at home or

abroad. They were given the choice to travel singly or in groups, and to stay in hotels, boarding houses, hostels, rest-homes or camps, according to individual requirements and financial capabilities. The sport-loving among the population were looked after by walking, bicycling, mountaineering and other clubs, which organized tours and expeditions, trained guides, built huts, published journals, handbooks and maps. Trade unions and co-operative societies planned and carried out holiday arrangements for members and their families. Schools, scouts, social services, religious groups, holiday fellowships, welfare societies, youth hostel associations, automobile, aero and yachting clubs, as well as municipal and county authorities have joined the general trend towards organized travel and planned holidays for Everyman. Special arrangements were made, usually in cooperation with travel agencies, for people attending meetings or congresses at home or abroad — a repetition, on a large scale, of the first excursion trains run over a hundred years ago.



Peter A. Ray

In 1939 over 27,000 people travelled from England by Imperial Airways to all parts of the world



Switzerland

A League that Works

by RENÉ ELVIN

SEVEN hundred and fifty years ago, on August 1, 1291, the men of the valleys of Uri, Schwyz and Unterwalden, renewing an ancient pact, formed a Perpetual League for self-defence against all who should attack or trouble them. Through good days and bad, this League has stood firm, until, in the fullness of time, it has become the Swiss Confederation as we know it today—perhaps the model for the Europe of the future.

The anniversary will be celebrated, in this grim year of 1941, in a spirit of sober thankfulness; for, though Switzerland, almost alone among the smaller nations of Continental Europe, has managed to preserve her neutrality, she is surrounded on all sides by Germany and the countries now dominated by Germany—and the Nazis are not likely to respect her rights longer than suits their convenience.

It may well be, however, that even Ger-

many, with all her disregard for the most sacred treaties, will find it consistent with her own strict self-interest to spare the last Republic in Europe, the oldest in the world. For, now as 125 years ago, "the neutrality and inviolability of Switzerland and her independence of all foreign influences are in the true interest of the policy of all Europe". These words stand in the Act of November 20, 1815, by which the European Powers agreed to give "formal and authentic recognition to the perpetual neutrality of Switzerland", and if they were true then, they are even truer now, because Switzerland has in the meantime become, through the Red Cross, the international clearing-house of Mercy.

At a time when the free peoples of the world are fighting against the worst tyranny ever known, Switzerland's policy of complete neutrality may appear cold-blooded to those





Black Star

who take no account of history. Such a view ignores the fact that Swiss policy is due neither to fear, nor to egoism, nor to any unwillingness to contribute a full share to European civilization: it is the natural consequence of historical developments. This policy was born 500 years ago, when Switzerland, having defeated the combined might of the 'Holy Roman Empire' and Burgundy, was one of the foremost military powers in Europe. After the battle of Marignano in 1515, she renounced all schemes of conquest and self-aggrandizement. This change of purpose was not achieved in a day: for twenty years later, in 1536, we still find Berne wresting the Pays de Vaud from the Dukes of Savoy. By the time of the Thirty Years' War, however, the policy of neutrality was firmly established in Swiss political thought, though even then Switzerland could not entirely disentangle herself from the encroachments of her neighbours. In fact, her near relative, the Grisons Confederation, and her own Valtellina Valley, were deeply involved in the first stages of the war. The defensive measures which had then to be taken by the 'Confederation of the XIII Cantons' (as Switzerland was called at the time) had the double effect of bringing more closely together the several cantons, hitherto extremely jealous of their autonomy, and of making them what we should call today 'neutrality-conscious'. The Peace of Westphalia, concluded at Münster and Osnabrück in 1648, formally recognized the independence and neutrality of Switzerland.

All through these troubled times, indeed all through the Wars of Religion, Switzerland, though by no means free herself from 'ideological conflicts', had shown the charity and hospitality which were to play so noble a part in her history. Her hospitality was

Many Swiss functions and institutions of today date back to the first defensive League founded in the 13th century. One of the most interesting of these is the Landsgemeinde, which is held annually in the following cantons: Appenzell, Glarus, Uri, and Unterwalden, where men from remote valleys and villages assemble to make their own laws and appoint their own administrators



Paul Popper

Members of the National Assembly are drawn from the ranks of the people. Hans Hofer (left) working in his own cheese factory at Spins, and (right) representing his fellows as a National Councillor. (Opposite) An aerial view of the stately building that once housed the hope of the world: the Palace of the League of Nations at Geneva

repaid tenfold by the refugees, who founded several of the main Swiss industries, such as watchmaking, silk-weaving, printing and lace-making. Persecuted English Protestants, in the reign of Bloody Mary, found a haven of refuge in Zurich, where the Pastor, the Reformer Heinrich Bullinger, made them welcome. They came in such numbers that a special college had to be opened for young Englishmen. Bullinger's benevolent activities extended also to those Protestants who had returned to, or remained in, England, and many of these, including Queen Elizabeth and the young, unhappy 'nine days' Queen, Jane Grey, were among his correspondents.

Switzerland is by nature a poor country. Without access to the sea, without mineral wealth, without even a sufficiency of good, arable land, her sons had early to seek their livelihood abroad. Many of them served as

soldiers of fortune wherever military skill and strength were best rewarded. This they called *Reisläuferei*, and, though deprecated by Swiss religious and political leaders, it went on for centuries. It did certainly deplete the Swiss valleys of many of their best and most useful men, but Switzerland's loss was the gain of other countries, chiefly France, Holland and England.

Anglo-Swiss relations have always been of the friendliest, and a century ago England had an opportunity of doing Switzerland a signal service. In 1847, religious conflicts between the Catholic and the Protestant cantons again came to a head. Prussia, Austria and France decided to seize the opportunity to impose their 'mediation', the results of which would doubtless have been the partition of Switzerland. Fortunately for her, the Powers had to reckon



Paul Popper



Paul Popper

Spring-cleaning in the Alps. The Swiss people have the same reputation for scrupulous cleanliness as their small sister-nation at the other end of the Rhine—the Dutch



The outside of their wooden Alpine houses, well scrubbed, every year is weathered from golden brown almost to black

(Opposite) Edelweiss, the white star of the Alps, grows only at great heights and mountaineers often imperil their lives to find it



From 'Mountains in Flower', Lindsay Drummond



Paul Popper



Paul Parber

(Left) The little town of Kandersteg in the Bernese Oberland, popular with visitors both in summer and winter. (Above) From spring to autumn cows are pastured on the lower slopes of the Alps, where their milk is made into butter and cheese. The cowmen recognize each animal by the sound of its bell. The combined music of the bells, all of different tones, makes a very pleasant symphony which can be heard for miles

Winter sports, melting snows and crocuses speak of Switzerland



with England, whose Foreign Secretary, Lord Palmerston, knew how to make the name of Britain feared and respected abroad. When his approval was sought for these designs on Switzerland, he shrewdly kept the negotiations dragging on, while informing the liberal Protestant cantons about this threat to their existence as a nation. A prompt and almost bloodless campaign, ably led by General Dufour of Geneva, brought the Catholic cantons to reason and back into a renewed and more firmly established Swiss Confederation—so that when the Powers attempted to intervene, the Swiss Federal Council was able to answer blandly that there was no conflict to mediate in.

The "two voices, one of the sea, one of the mountains", sung by Wordsworth, have indeed called to each other for centuries. Thus, Milton congratulated the Swiss cantons in 1654 on having maintained their freedom and independence, and Cromwell tried hard to get them as allies. Bodmer and Breitinger, the heads of the Zurich school of criticism, were the first to introduce Shakespeare and Milton into German literature, and the first important Swiss Review was started by Pictet de Rochemont in 1796 under the title *Bibliothèque Britannique*, because the editor took as models the English essayists, Steele and Addison.

Heraclitus's ancient tag, "War is the father of all things", has been the foundation of German thought, and Teutonic philosophers have never tired of praising war as the great spiritual rejuvenator. Not the least of Switzerland's services to mankind has been to expose the fallacy of this faith, for outstanding though her soldiers have been, they are outshone by her writers, artists, philosophers and scientists, whose numbers and eminence are out of all proportion to the size of her territory. Swiss men and women of letters have made distinguished contributions to at least three literatures (four, if one includes the Romansh language spoken in some valleys of the Grisons). Among them, Jean-Jacques Rousseau, Germaine de Staël, Benjamin

Constant, Gottfried Keller, Conrad Ferdinand Meyer, and many others who belong to the world as much as to Switzerland.

It has become almost commonplace to point to the Swiss constitution as an example for the establishment of future United States of Europe. But the mere adoption of such a constitution would not, unfortunately, secure its working. For, far more than any written document, it is the spirit of solidarity and common sense, the practical and political experience of centuries, and the strong civic sense of the Swiss people that unite the twenty-five cantons in mutual respect. If similar conditions could be made to prevail in Europe, the drafting of a constitution would prove the easiest part of the task.

If there is one thing that Swiss institutions can teach us, it is that democracy is first and best learned in the daily working of a small community, whose every member knows both the issues and the men he and his fellow citizens have to meet. Thus, in Switzerland, every hamlet, village, township, city, as well as every canton, has its own small parliament and magistrates, the smaller community in each case delegating its best men to the larger. The Federal Council, the highest executive authority of the country, and the Federal Tribunal, its Supreme Court, are generally composed of men who have risen in this way, and represent all peoples and creeds in the land. Yet, while these magistrates are the richer in experience for their work in their own community, they subordinate parochial concerns to the interests of the country at large.

If wisdom presides over the coming reconstruction of Europe, the work will be carried out similarly from below upwards. Switzerland may thus one day provide, both in her constitution and in her spirit, the microcosm of a European Federation. Then, and not till then, will those differences in culture and outlook which have up to now periodically rent asunder the fabric of European peace, strengthen and enrich the common civilization of our Continent.



Black Star

The Swiss sentinel stands guard over the last Republic in Europe

W. H. Hudson

The Naturalist of La Plata

by V. S. PRITCHETT

This year, on August 4, the centenary of Hudson's birth is being commemorated in South America. In paying tribute to his genius Mr Pritchett reminds us how much we as a nation owe to the continent that inspired him and other British writers and scientists to do their best and most important work

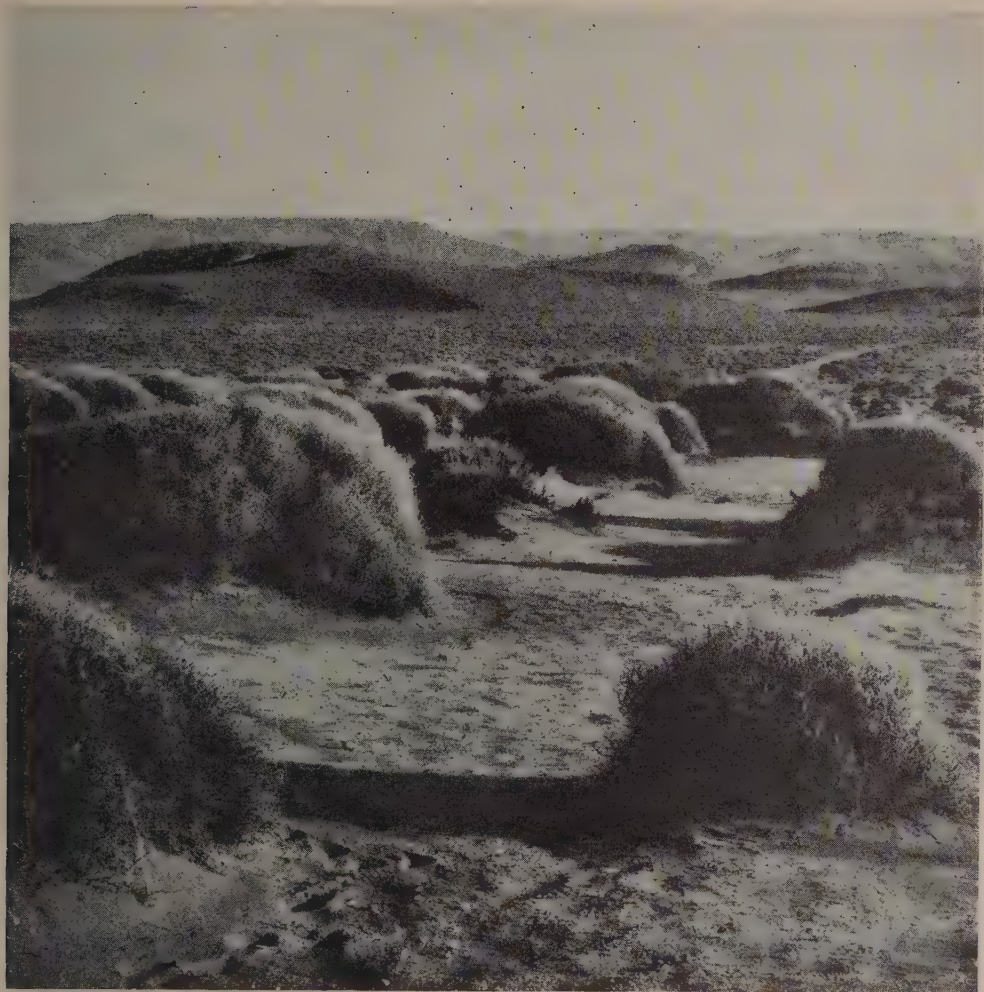
TEN miles from the cobble-stones, the cow-skull walls, the top-hats and red waistcoats of Buenos Aires as it was under the dictator Rosas in the year 1841, there stood in the pampas in the direction of Quilmes, an undistinguished farm called the House of the Twenty-five Ombú Trees. English-speaking people lived there with their children, and if you could have heard them you would have noted that the accent was Yankee and not English. Mrs Hudson came from Maine and Mr Hudson was born somewhere in New England, though his father had come from Devonshire. It was to this family of the ombú trees that W. H. Hudson, the English naturalist, was born a hundred years ago.

The centenary of W. H. Hudson is a reminder of how large the debt of English literature and science is to the life and scene of South America. Victorian science indeed owes everything to the South American continent. Darwin watches the Brazilian forests and contemplates the deserted uplands of Patagonia on the famous *Voyage of the 'Beagle'*; Wallace's journeys are hardly less important. And then there are diligent naturalists like Bates, whom one seems to see chasing along the banks of the Amazon with his collector's bottles and butterfly nets; or eccentric ornithologists like Waterton, who shocked explorers by going for a ride on an alligator and pulled the legs of scientists by sewing together the skins of birds and animals and inventing new 'species'. Add the names of Cunninghame Graham and W. H. Hudson and the South American school in English literature is as definite as that great Arabian one which runs from Doughty to Freya Stark.

Is there something in common between those two violently different regions? Is the

imagination of Englishmen always stirred by land which contrives to look like the sea? For the deserts of Arabia, the empty uplands of Patagonia, the silver rich, sibilant grass of the pampas and the deep blur made by the tropical forests, suggest the sea's space and monotony.

We who live on islands suffer from a kind of claustrophobia; we long to leave them and to undertake endless journeys; and in the long journeys of South America, as in those of Arabia, we find different aspects of the same call to primitive instincts. Hudson himself has described this call at the end of *Idle Days in Patagonia* (one of the earlier, fresher and unlaboured books), and I have never read so keen an evocation of the silences of nature; or so exact an analysis of that experience, so like conversion, whereby a country is suddenly stamped upon the mind and heart. In the 60's or 70's of last century, when Hudson was in the little town of Carmen near the Straits of Magellan, recovering from a bullet wound, he tells how he used to climb out of the valley and pass the day in the grey thicket without seeing a soul and without hearing a sound except the occasional kick of his tethered horse or the very rare call of a bird. In these silences, according to Hudson, the mind stops as a thinking machine and becomes incapable of reflection. Instead, like an animal's, it becomes intensely watchful and aware, and Hudson felt there had been restored to him "instantaneously the old vanished harmony between organism and environment". In war, at sea, and in the great simplified phases of nature, we see Nature as a whole, Hudson says, and feel the forgotten primitive mind rising to the surface of consciousness.



The South American pampas, on which Hudson was born and spent his childhood. The word pampa is of Quicha (Indian) origin, meaning open space or country

It is a shock after that chapter to remember that Hudson spent only the first twenty-nine years of his life in the pampas and Patagonia; and that the rest was passed in a Bayswater boarding-house, where he aged like an irritable old eagle. Instead of the ombú, that strange spongy tree like a vegetable umbrella whose timber "rots away like a water melon when it is cut", there were the not very singular London planes; instead of the snakes, the rhea and the armadillo, the scissor-tail and carrion hawk, he had to look at the lapdogs of boarders, the towny cats of

Paddington and the trite London pigeons. But though we think of Hudson as the bird-man who grew to have the learned and gritty look of a lean bird of prey, frightening to visitors as he stood in the gloomy Bayswater doorway, he was not a man of the forest. He was a man of the spaces and plains. Bates, Waterton and Wallace belong to the jungle—one pictures them in their hammocks under the huge tree ferns of the Amazon—but Hudson belongs, like Cunninghame Graham, to the open country, the pampas and the wastes; and when, later on, he came to write



Mansell

For 50 years Hudson lived near Hyde Park, where his memorial, Epstein's beautiful and symbolic bas-relief of Rima, the heroine of his *Green Mansions*, now stands

about England, he was drawn to the bare downlands.

The evidence of the romance *Green Mansions* is deceptive on this point; for while Hudson was secretive about his life in South America and would not say why he left the country, it is known that he was never in Venezuela and that the forest where Rima moved on her mysterious Maeterlinckian journeys, was a literary one, a wonderful evocation by an imaginative naturalist who knew what ought to be there but who had not actually been to the spot.

To those who went to see Hudson sitting in his boarding-house, morose, poor, unrecognized, there was always the sensation that here was a man whose life had stopped. His real life was, to use his own title, *Far Away and Long Ago*. And "far away and long ago" for him was the real life of man too, hidden in the primeval past. Reading that

autobiography again — and it is superior to laboured romances like *Green Mansions*—one can understand how the isolated life which the Hudsons lived on the pampas must have intensified emotional life within their family; so that when the parents died, it must have been like a tearing out of the heart. No other life afterwards could burn with the same flame. The isolation on the plains must have given even the words of a neighbour the inhuman fascination of natural history. The superiority of Hudson to the other writers in his class lies in two things which spring straight from this early isolation: first, the bird-watcher and snake-watcher is also a man-watcher; second, all his studies of living creatures, whether he is looking at the battles of the ants or the bones left by the puma, are set in the serene, timeless and tragic panorama of natural law. Hudson was not, as so many of the Victorians were, a mere collector



By courtesy of the Argentine Embassy

Barren mountain country in the territory of Rio Negro where, as Hudson relates in Idle Days in Patagonia, he drank deeply of the "sweet and bitter cup of wild Nature"

and classifier: he had an imaginative response to life and death. Down on the Rio Negro in Patagonia he had marvelled to see the so-called Black River look in fact as clear as a green sea to the eye, though it was colourless crystal when you dipped your glass into it. As a piece of observation that is commonplace enough, but he writes: "Doubtless man is naturally scientific and finds out why things are not what they seem, and gets to the bottom of all mysteries; but"—and this bent of his commentary is typical of Hudson—"his older, deeper, primitive, still persistent nature is non-scientific and mythical and, despite of reasoning, he wonders at the change;—it is a miracle, a manifestation of the intelligent life and power that is in all things".

Darwin overshadows all our South American naturalists. Their stress is always on the fantastic products of nature which South America offers: the peculiar trees like the

ombú, the gigantic vegetation, the phenomenal flowers which hang up like hats on the trunks of the forest, the tearing fish and the birds which ring or clatter like mechanical bells, the insects like the living machine tools of some incredible and unceasing factory. In the Indian these writers were not deeply interested. He was the savage with the blow-pipe, dreading the forest he lived in. Anthropology had scarcely appeared to show that the interest of savage life lies not in individuals but in its community. Hudson had not this kind of interest in man. Man to him was the individual who, in the savage state, shows more clearly than we do, the kinship with the remote past. There is a passage in which Hudson describes how a friend, seeing him sick, said that he wished Hudson would die because "his illness disturbs me". Hudson was delighted by this innocent evidence that a savage instinct had not yet been atrophied



By the river Plata. 'La Plata', the subject of one of Hudson's best-known books, stretches half way from the Atlantic Ocean to the Andes

in his friend. And there is another passage—this time from *A Naturalist in La Plata*—which describes a variation in the human species. The passage is worth quoting at length for it is characteristic Hudson, vivid and with some sort of fibrous, argumentative quality which gives him a flavour and a scope no other naturalist has. Note again it is not the fact only which catches his eye but the whole scene, its framework and a sense of its local significance in the vaster scheme of nature:

I was again travelling alone in a strange district on the southern frontier of Buenos Aires. On a bitterly cold midwinter day, shortly before noon, I arrived, stiff and tired, at one of those pilgrims' rests on the pampas—a wayside pulperia, or public house, where the traveller can procure anything he may require or desire, from a tumbler of Brazilian rum to make glad his heart, to a poncho, or cloak of blue cloth with fluffy scarlet lining, to keep him warm o' nights; and, to speed him on his way, a pair of

cast-iron spurs weighing six pounds avoirdupois, with rowels eight inches in diameter, manufactured in this island for the use of barbarous men beyond the sea. The wretched mud-and-grass building was surrounded by a foss crossed by a plank drawbridge. . . . I conjectured that a goodly company of rough frontiersmen were already making merry at that early hour. . . . When I went in and made my salutation, one man wheeled round square before me, stared straight into my eyes and in an exceedingly high-pitched, reedy or screechy voice and sing-song tone returned my "good morning" and bade me call for the liquid I loved best at his expense. I declined with thanks, and in accordance with gaucho etiquette added that I was prepared to pay for his liquor. It was then for him to say that he had already been served and so let the matter drop but he did not do so: he screamed out in his wild animal voice that he would take gin. . . . Professor Huxley has somewhere said, "A variation frequently occurs but those who notice it take no care about noting down the particulars". That is not a failing of mine and this is what I



Dorien Leigh

The Gaucho transporting wool across the pampas. He "lives half his day on his horse and loves his freedom as much as a wild bird", Hudson said of him, and also: "On horseback he is of all men most active. His patient endurance under privations that would drive other men to despair, his laborious days and feats of horsemanship, the long journeys he performs without rest or food, seem to simple dwellers on the surface of the earth almost like miracles. Deprive him of his horse, and he can do nothing but sit on the ground, cross-legged or en cuclillas,—on his heels. You have, to use his own figurative language, cut off his feet"





E.N.A.

Now, as when Hudson knew it, 'La Plata' is a country of horses and sheep. (Above) Gauchos at work on the making of a saddle; for stuffing they use reeds, which the seated man is binding together. (Opposite) Horses stand patiently while their masters drive sheep from the grazing grounds through a gangway towards a sheep train that will take them to the distant market

noted down. . . . He was about five feet eleven inches in height—very tall for a gaucho—straight and athletic, with exceedingly broad shoulders, which made his round head look small; his long arms and huge hands. The round flat face, coarse black hair, swarthy reddish colour, and smooth hairless cheeks seemed to show that he had more Indian than Spanish blood in him, while his round black eyes were even more like those of a rapacious animal in expression than in the pure-blooded Indian. He also had the Indian or half-breed's moustache, when that natural ornament is permitted to grow, and which is composed of thick bristles standing out like a cat's whiskers. The mouth was the

marvellous feature; for it was twice the size of an average mouth, and the two lips were alike in thickness. This mouth did not smile but snarled both when he spoke and when he should have smiled; and when he smiled the whole of his teeth and part of the gums were displayed. The teeth were not, as in other human beings—incisors, canines and molars: they were all exactly alike, above and below, each tooth a gleaming, white triangle, broad at the gum where it touched its companion teeth and with a point sharp as the sharpest pointed dagger. They were like the teeth of a shark or a crocodile. . . .

The end of the experience has that sardonic



Dorien Leigh



Paul Popper

Trees meant a great deal to Hudson when he recollected his South American childhood. The 'Caraiuba' tree shown here is a conspicuous feature of the drier and more open parts of North Argentina. When its leaves have fallen, showy yellow or pinkish-purple flowers appear

humour which reminds one of Waterton's famous practical jokes on the English learned societies when he brought his spurious ape man over from South America. He would have liked (Hudson says) to have got that man's head and to have taken it back to England "to drop it like a new apple of discord, suited to the spirit of the times, among the anthropologists and evolutionists" and to cause perhaps "a battle more furious lasting and fatal to many a brave knight of biology, than was ever yet fought over any bone or bony fragment or fabric ever picked up, including the celebrated cranium of Neanderthal".

Born and brought up in South America, Hudson caught the inherited Spanish feeling for the bizarre, fantastic and sardonic in human beings and a feeling for the simplicity and magnificence which arises everywhere where "the lordly language of Castile" has struck its roots. The pampas is one of the oldest settled regions of the continent, and that antiquity together with the mixture of Spanish and Indian blood, has developed characters which in Hudson's time were gigantic in their individuality. The savagery of the wars of the turn of the century was still in everyone's memory. Rosas was ruling, a terrible man like those great eastern potentates. As a child Hudson remembered the grotesque Don Eusebio, Rosas's fool, who walked about the streets of Buenos Aires protected by an armed guard so that no one dared to jeer at him; he remembered, too, the lawless soldiers appearing at the estancia and demanding horses from his father, in the flight from the Brazilian army. One day he saw a young man bound to a post in a barn: he was being held for murder. There was violence in the air; the sight of death in animal and man was common, the talk of throat cutting and massacre continuous. And in such an atmosphere, the stories of primitive suffering, primitive pride, catastrophe and remorse such as he later on wrote in the collection of stories called *El Ombú* had the unyielding simplicity and emotion of legends. The beggars, the itinerant teachers,

the gaucho—but, by this time, in his decline—the curious drunken neighbours and their beautiful daughters to whom tragedy always seemed to be the certain destiny, these were his teachers on the pampas.

In man and nature, the pampas offered to Hudson as rich, as delicate and as violent a variety of material as any man who loved strong passions could desire. His gift, when one recalls those pages which remain in the mind, is for capturing entirely the pleasure of doing and seeing things for the first time. He is not a rhetorical writer nor even very eloquent. He appears rather to write on horseback, or on his knee as he lies in the shade watching some bird or animal or insect living its extraordinary life. He carries you to the spot. You are with him when at night he lies back full-length on the back of his horse as it trots through the long sishing grass, so that you seem to be drawn through water under the stars. You are with him again in one of those 'thistle years' when the tall sharp-spined thistles wall in the estancias so that the horsemen can no longer ride but must stay fretting, morose and restless in their homes; you are there to see the sudden panic flight of a thousand dragon-flies, a flight which tells that in five or ten minutes the famous *pampero* will be blowing, perhaps smashing down the hated thistles at last or blowing some wood-spark on to them which will set the plains on fire. You see the crimson crescent flights of the flamingo, or that great tangle of snakes he once found in the wilderness; or hear that bell-like music to which he climbed enchanted at the end of weeks of sheep-droving across the plains, to find that the sound came from millions of grasshoppers. The naturalist is always there, to give a factual zest to a narrative which otherwise might be thin and ecstatic. He is perhaps arguing with Wallace and Darwin about the wing displays and love-dances of birds in that once famous controversy; but as when he dipped his glass into the waters of the Rio Negro, his observation is not only an act of curiosity. It is an act of poetic wonder too.

Citizens without a Country

The Japanese in California

by HERBERT STANTON MARSHUTZ

THERE are roughly 150,000 Japanese in the United States of America, over two-thirds of whom are found in the State of California. If the United States and Japan were to go to war, how would these Japanese react? The older generation, the 'Isseis', born in Japan, might be expected to show sympathy with their own country, but what of the 'Niseis', their American-born children, citizens of Uncle Sam?

Today in California, and wherever you find any concentrated population of American-born youth of Japanese descent, you will find them thoroughly Americanized. Their English is perfect, their dress accords with the customs of those around them. Their average age is nineteen, and were it not for racial features it would be impossible to differentiate a Nisei by mannerisms or speech from an American. In fact, the rising sons and daughters of those who emigrated to California from Japan do not want to be known as Japanese, but as Japanese-Americans, or Americans. They are citizens of the United States by virtue of their birth in that country—as a rule good citizens, not too conspicuous in number or in behaviour.

In 1885 the modern government of Emperor Meiji first allowed his subjects to emigrate, although some 150 contract labourers had landed in Hawaii in 1868. Thousands followed their example after the Emperor's decree, both to Hawaii and to the mainland of California. They were of the lowest and poorest class of labourers and farmers. Their earnings were negligible and a decade or more of labour was needed before they were able to save enough to send home for their brides. It is owing to this waiting period that there

is a difference of nearly forty years in the average age of the first and second generations in America.

The tide of Japanese immigration rolling across the Pacific reached greater heights each year until between 1901 and 1910 a record total of 129,797 was recorded in Government statistics. In 1906 the various voices raised in indignation at the onswEEP of Oriental labour, which was bringing more Japanese than the already forbidden Chinese, had reached a climax. The sons of Japan between 1885 and 1908 had increased their numbers in California fifty times. Result: between 1900 and 1906 violent agitation broke out. In San Francisco the Japanese were barred from the public schools, and the Japanese press spoke of war. Pressure by President Theodore Roosevelt brought about the rescinding of the order. He was sympathetic towards the Japanese, criticized as 'infamous' the *San Francisco Chronicle* in its support of the anti-Japanese campaign of the powerful American Federation of Labour. American-Japanese friction subsided and the famous 'Gentlemen's Agreement' was signed, bringing to an end direct immigration of labourers to America, except 'picture-brides'. These were the wives selected by 'open subterfuge' in California from photographs mailed from Japan, and united first in an absentee-ceremony so that admittance to the United States was possible. But many came, who were not labourers or brides, via Mexico, and the Latin Americas. So that, in the next ten years, nearly 84,000 Japanese landed in the country. A large proportion were women. Then in 1920 Japan ended the traffic in 'picture-brides'. But the ensuing decade, 1921-30, brought 34,000 Japanese to America, some of whom



Pictorial Press

'Niseis', the American-born children of Japanese parents at the Fourth Annual Nisei Festival held in 'Little Tokio', a district of Los Angeles inhabited by 15,000 Japanese

evaded the anti-picture bride restriction and arrived as catch-as-catch-can 'excursion-brides': the rest were males who had come by devious ways.

This immigration total is all the more surprising when one considers that in 1924 the United States had passed the Exclusion Act, which, after years of pressure in Washington, was expected to end the increase in Oriental population. In 1924, 5000 Japanese-Americans were born in California alone, many to mothers who had been selected from photographs! In more recent years the arrival of Japanese, except by the stork route, in the United States, has been comparatively small.

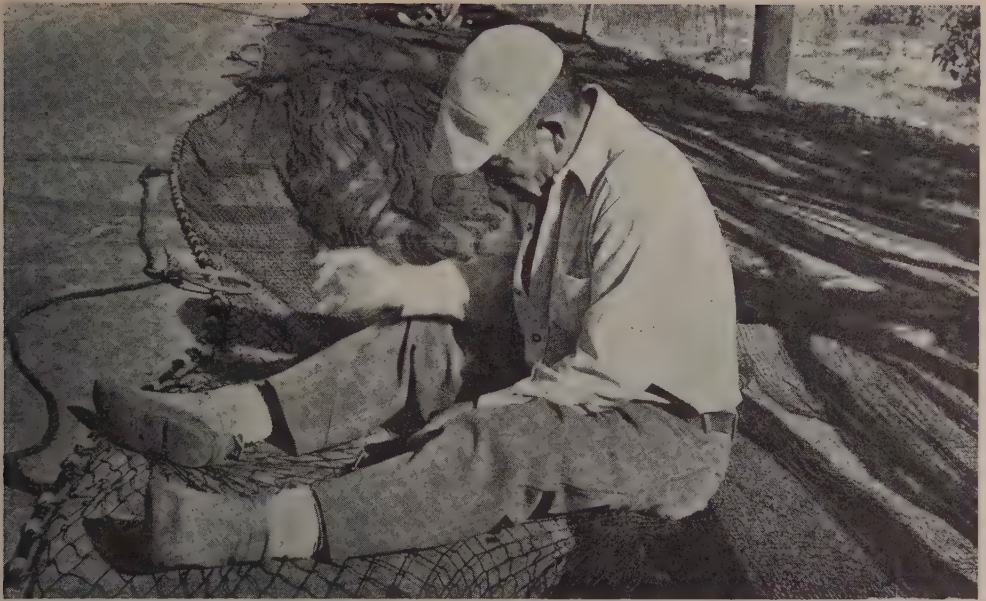
The state's Division of Vital Statistics has reported that since 1930, the year of the last Federal Census, approximately

15,300 children were born to Japanese, or Japanese-American, parents in California. Deaths totalled about 6000. It is obvious today that the Japanese-American born population has increased by something like 10 per cent in the past decade. But death is more frequent in the homes of the original settlers, whose average age is today about sixty. It will be interesting to see if birth keeps up with death from now on; it will also be interesting to watch the departures due entirely to the flow of first generation men and women back to their homeland.

In spite of the excess of births over deaths, the population totals of the past decade register a decline in California's Japanese populace. There are several reasons for this return migration; in



H. S. Marshall



H. S. Marshute

(Opposite) *A small citizen of the United States who enjoys life on her Japanese father's fishing boat off Terminal Island, Southern California.* (Above) *Mending his net on the coast road at Terminal Island: one of the older generation of Japanese whose catch consists of 'sardines', anchovy and mackerel*

general the most common are a desire to visit relatives and possibly spend the ebbing years with them; a sense of incompleteness in America owing to lack of citizenship; and a feeling of uneasiness engendered by friction between the American and Japanese Governments. This last cause has brought about a slight acceleration of the back-to-Japan movement, particularly since the treaty abrogation of January 1939. Death and departures therefore are winning out over the stork.

An interesting observation on this subject is the statistical fact that the ratio of second-generation American-born Japanese females exceeds males by seven to four. However, third-generation arrivals are showing a tendency to reverse the balance. The trends are in agreement with historical studies made by immigrant population birth records.

Not only miles of sea separate the two generations, but time and a vastly different environment have brought about

a new race of American Orientals. In religion, thought, mode of living, even in appearance and physique, Niseis differ from their Japanese-born parents or grandparents. Many are Christians in contrast to their forebears' firm adherence to the Buddhist faith. The question of loyalty to the United States, they ardently answer, is one that never enters their heads. They have greater problems to ponder—the most immediate being their economic future in America. For in a country with unemployment at an 'all-time high', their own bread-and-butter problem, intensified by racial considerations, is a matter of grave import.

The economic problem of the new generation is not that of their parents. The first Japanese arrivals in the 'Land of promise' gradually drifted into agriculture, after temporary occupations as labourers, servants, railroad or mine workers. Lacking capital, and for the most part experience, they could not go into business. The land, then, gave the



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A spy? Not at all: only a young Nisei following a favourite hobby on the docks at Fish Harbour, Terminal Island

independence they desired and took them away from the hazard of labour troubles. Many had been farmers at home. And it was simple enough to find agricultural work, with a steady demand as new lands were opened, and the white population shifted to cities. Japanese labour proved satisfactory to the landowners. It was steady, it was cheaper, and free of labour strife. The Japanese were easily satisfied as to housing, the rough shelters as well as the wages being luxurious compared to what they had known in Japan.

Hard work and thrifty habits over a long period of years eventually enabled a number of Japanese to control a great deal of farm land, mostly on lease. Although a considerable acreage is owned and operated by Japanese, it is of necessity in the name of either an American 'dummy' or a second-generation son or

daughter over twenty-one years of age. For the foreign-born Oriental, not being eligible for citizenship in the United States, cannot own property in California.

There have been reports of heavy Japanese (home country) investments in California land, but it has been impossible to confirm this. Men who have been closely associated with the Japanese in banking or in land operation, scoff at such 'rumours'.

When, early in 1939, the Japanese-American commercial treaty was abrogated by Washington, the surface of Japanese-American affairs in California was not noticeably affected. The termination of the agreement, however, had a theoretical effect upon all students, and visitors to the United States under business permit. While such were formerly of unlimited duration, they became

six-month permits, and the limitation is applicable to American citizens in the Orient as well.

Throughout the state today Japanese farmers produce, market and in some instances dominate the largest proportion of much important fruit and vegetable crop production. In the past twenty years Japanese farmers have worked from 50 to 85 per cent of the irrigated lands in the vast San Joaquin, Sacramento and Colusa counties. At a public hearing a short time ago it was testified that the Japanese control 75 per cent of the vegetable crop and 90 per cent of the berry crop in Southern California.

One of the most successful examples of the industry and thrift of these people when engaged in enterprises to which they are suited is the story of George Susumu Hasuike. Born in Japan, he arrived in California young enough to shake off the traditions of his home land. He earned his first real money washing train windows in Los Angeles. At nineteen he purchased a fruit and vegetable stand for \$200. Later he purchased a larger one, and soon sold that at a profit. In less than ten years he sold his 'chain stand' organization for \$20,000. Today he controls the Three Star Produce Company, with nearly fifty market stores, and has 450 Niseis on his pay roll. A quarter of them are college graduates. At forty-one years of age he is head of a \$3,000,000 concern. Incidentally, the Americanized Japanese born is considered a 'half-Nisei'—the slang word for them is 'Hansei'.

In one community alone, Terminal Island, near San Pedro (Los Angeles Harbour) the Oriental fishing colony numbers nearly 1000 families. And from this concentration of population and its intensified activity at sea have arisen the stories of spies which have served to arouse suspicion of every Japanese, young and old, and particularly any man, woman or child indulging in a favourite hobby, photography.

Some of the suspicion, even of the new-generation Japanese citizens, is based upon their opposition to California legislation that would bar aliens in the fishing industry in coastal waters. The young Niseis, however, easily and perhaps logically explain their objection to the proposed stringent anti-alien fishing laws. Such legislation would prevent their own people—their fathers, uncles, cousins—from earning a livelihood. For ninety-seven out of each hundred fishermen of Japanese descent are foreign-born Issei.

The Japanese-Americans of California are considered by some economists as the state's most secure minority for the reason that in many of the fields of occupation that provide them with a livelihood they hold a near monopoly. And, too, by virtue of their full education, they are better prepared to carry on in whatever activity they may engage.

The same activity that made them a success in Japanese agricultural enterprises begun by the first generation and carried on by the sons, has marked all of their social and political educational activities. Gauged by the thoroughly Americanized life they lead, the gap between the Niseis and their parents is as wide as that between their ages. The Niseis have taken their education most seriously, and by absorbing every bit of knowledge with which they came in contact, as well as the customs of others about them, have in a single generation jumped from the more or less medieval ideas of their Japanese-born farmer parents to the 1940 'streamlined' American.

The cultural chasm that separates the two generations has a counterpart in the racial prejudice, latent though it is, between the young Japanese and their American fellow-citizen. A firm minority-consciousness and an enforced gregariousness are the natural results of such a situation.

Citizens though they are, the Niseis not only live in a district all their own,



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(Left) A first-year college student working a horse-drawn plough on land his family has leased for 18 years. (Right) His mother, who refused to pose for her photograph, cutting and tying her home-produced rhubarb which, with beet and cabbage, she sells at the roadside

but sociologically in a world of their own.

In California, and the neighbouring states of Oregon and Washington in the north, there are nearly 500 Nisei organizations. Some are purely social, but the majority are fraternal, civic, religious, cultural, and for sports. They have their own division (or post) of the powerful American Legion, composed of ex-soldiers or sailors. Faithful to the old Roman adage, they are doing what the Americans do—and doing it thoroughly and well. Their slogan is that of the strongly entrenched Japanese American Citizens League: 'Build Toward Responsible Citizenship'. The Headquarters of the league are in the centre of the largest Japanese district in America—on the fringe of old downtown Los Angeles, where

in an area about twelve blocks square, known as Little Tokyo, reside perhaps 15,000 of three generations of Japanese (with an occasional fourth-generation infant making his or her bow).

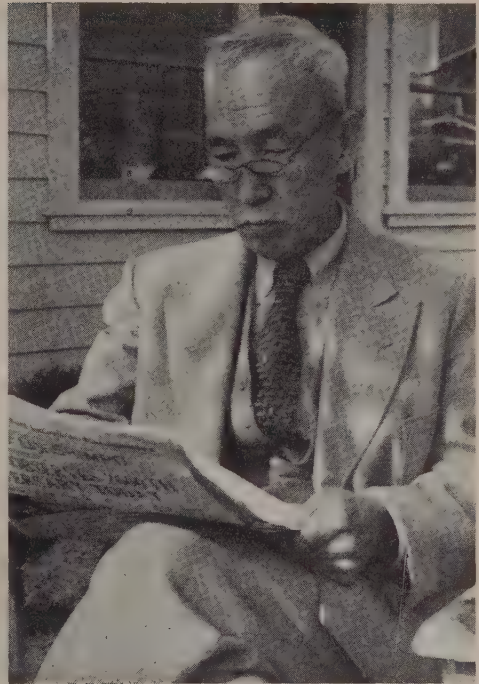
Here are newspapers of their own (printed partly in English), churches (Christian and Buddhist), department stores, apothecaries (drug stores), rooming houses and hotels, beauty shoppes, theatres, banks, schools, cafés, doctors, dentists, gasoline filling-stations, photographers and embalmers. It is a strange mixture of buildings, largely old and badly cared for. Few are modern.

Life in this section is a complete racial entity. Customers in the hundreds of stores and offices, except in the import, export and financial specialties, are 95 per cent Japanese. An occasional enter-

prise caters to Filipinos, who have taken over practically all of the more servile occupations formerly held by the Japanese in California.

In other parts of Los Angeles city and throughout the state are smaller groups, with the educated and cultured Nisei more numerous where the homes are newer. In agricultural and fishing districts are other settlements. Where Japanese-owned institutions cater to American trade, for example imported art wares, restaurants, etc., trade has fallen off since the beginning of hostilities in the Orient. In San Francisco, the state's second largest city, the Japanese population has not grown like that of Los Angeles, but there are today more Japanese-owned shops in the former city's Chinatown than ever. Here is one place where the tourist will assume he is buying from the ever-popular Chinaman. And thus is the effect of the sporadic anti-Japanese boycott campaign nullified.

In each Japanese centre of California one always finds a native language school. Although every youngster attends the regular public schools of the state five days a week, for one hour after school, and in some sections on Saturdays, he is sent to one of the 'gakuen'. Years ago the parents, fearing the rapid trend toward Americanization was at too great a sacrifice of everything that was Japanese, started these little schools, which are operated and supported by Japanese school districts. In addition to soaking up English education at the elementary and high schools, and later at the universities, the young Japanese-Americans were forced to absorb culture of the old world—religious dogmas, moralities and philosophies of old Japan. Not only did the new-world children lack interest in these subjects, but there was more education than even their eager minds could absorb. They did not want so much that was Japanese. Gradually the 'curriculum' was altered so that now only Japanese reading and writing are taught. And

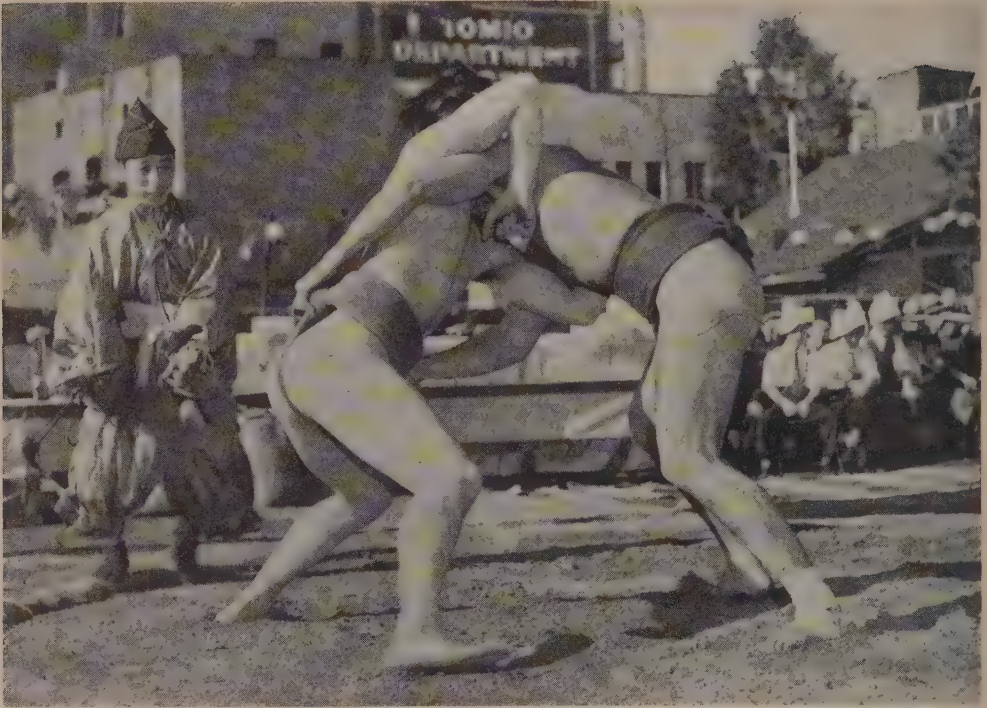


H. S. Marshutz

Older Japanese are proud of the achievements of their children: this man's son is English section editor of the Japanese newspaper he is reading

because certain groups in California thought these schools were acting as centres of anti-American propaganda, attempts were made to control them. Every textbook, in translated form, is on file. In 1921 attendance was made compulsory by the state, but six years later this was held unconstitutional.

But the Japanese-born parents are still hopeful that the tie that binds their children to the homeland will not be severed entirely. Many a youth is sent to visit across the Pacific, some are encouraged to stay. But this plan has not worked out very well. Life in Japan today, modernized though it may be compared to a generation ago, is not suited to the Americanized boys and girls. They simply cannot accept such traditional customs as group bathing, sleeping on



H. S. Marshutz

Sumo (wrestling), as well as Judo (ju-jitsu) and Kendo (fencing) are popular wherever Japanese reside in the western United States. The referee, in traditional garb, calls out points in a shrill voice

wooden pillows on the floor, no co-educational schools, and rice, rice, rice every day. Girls who hoped for romance in Japan could not find themselves marrying a man steeped with the archaic marriage code of Japan.

There are other reasons why the Japanese-Americans of California do not return to the land of their parents—and the principal one is that they like America better. Even the first generation lost the desire to leave the United States to return to a rigid social system and to remove their children from the educational, economic and social opportunities in this new country. Many revisited Japan only to be disappointed. The younger visitors—American born and bred—did not feel at ease and, because of dress and accent, were often mistaken for Koreans.

It is interesting here to note that only since December 31, 1939, has the United States Government realized the necessity of maintaining some control over its Japanese citizens while in Japan (as well as all its Nationals while abroad).

Of thousands of Japanese of all ages interviewed for statistical purposes in California, only 5 per cent expressed a definite intention of immediately or eventually returning to Japan. It is surprising that the bulk of the first generation, men and women who faced, and still do face, tremendous economic hardship, are satisfied with their life in the United States. Most of them like their occupations, and, outside their inability to own land and property, are content. California is their favourite residence—they like its temperate, sometimes warm climate in comparison to

the rain, fog and snow of the north and eastern states.

In the fertile valleys of California, every day in the year, weather permitting, from sun-up to sundown, one may see the Japanese farmer at work in the fields, or in his nursery. His wife, too, dons a pair of trousers, and usually a sun-bonnet, to spend the major part of the day picking, pruning or planting. Her husband, her son or sons, may be at work in another part of the farm. The daughter, if there is one (and there usually is), may be caring for the simple two or three-room dwelling, if no school duties remain unperformed. She more than likely is the family book-keeper.

One Sunday afternoon, on a picture-taking motor trip I stopped at the side of a road where a middle-aged Japanese woman was cutting and tying rhubarb. Several boxes of cabbage and beets were stacked nearby. A crudely painted sign read: Rhubarb, beets, cabbage, 2 bunches 5 cents. A ten-cent purchase practically filled the truck in the rear of the car. And although she refused to pose for a photograph, I managed to take a few without her knowledge. Across the field I found her son, an amiable, well-spoken first-year college student, behind a horse-drawn plough. His family has worked this leased land for eighteen years. Many of the farms in that valley, he explained, were 'controlled' by one individual Japanese land-capitalist who leased vast acreage for the purpose of sub-letting in small plots. Not all was in vegetables and berries. In certain sections these industrious people produce valuable flower and seed crops—and in some parts of California are the largest growers of profitable flower breeds.

All these enterprises require funds, and while a Japanese business man or farmer can, if he wishes, be a hundred per cent independent of American contact and capital, he can and does finance himself

often through various American banks. Indeed it can be said that no other racial minority is held in higher esteem as to fulfilment of obligation than the Japanese and Japanese-American.

But not all can, or want to be, farmers. The high school- and college-trained Niseis do not find the most desirable type of jobs waiting for them. They are not interested in field labour. Nor do they wish to work in the numerous fruit and vegetable market-stands that are either owned or managed by their fellow-citizens. They prefer 'white collar' occupations—book-keepers, salesmen, etc. The girls like stenography, teaching, nursing.

Throughout California a well-founded respect for the second-generation youth has been growing. Gradually, in the past decade, the real and imagined economic competition of the sons and grandsons of Japan has subsided. The Niseis have been demanding the same living standards as their American neighbours, the same wages. Japanese-American competition is exceedingly slight today: they work mainly for their own people, just as they live among themselves, and invariably marry among their own race.

The minority-conscious Californians used to maintain that the future of the entire western United States would be adversely affected by the rapidly growing Japanese population. There were prophecies of an Orientalization of the Pacific Coast from British Columbia to the Panama Canal. But in 1940 a new opinion began to sweep over the western hemisphere and wherever the renaissance of the Japanese, in both the old world and the new, is understood. The Americanized Japanese, it is believed by some observers, hold the key not to the future of the West, but to the future of Japan, where their modernized ideas of living and freedom from traditional restraint are rapidly spreading.

Snail Men in Orkney

by ALEX COMFORT



SOONER or later, almost everyone who visits Orkney lands in Stromness. My friend Fairbanks and I found ourselves there on the 1st of April in the afternoon, after the foulest crossing on the smallest steamer I remember—a vessel which presented two alternative modes of travel: either you stayed on deck with the stoical ticket collector in airman's overalls and helmet, watching grey seas breaking over the small motor car lashed on the foredeck, or you went below and were incontinently sick. Off South Ronaldshay an aged Scotsman shot out of the companion like a cork and slithered railwards gasping "Och, it's nae use; A canna hauld it!" It was an incongruous piece of low comedy. There were treacly grey seas the colour of dirty suds running by, and the islands lay all round in a grey stationary haze; the nearer and smaller ones passed with the semblance of steady motion common to islets seen in rough weather from shipboard. They seemed to leave a wake—their sides were steep and black, falling among rocks where shag sat in pairs and threes as if put there, with their upright Greek-vase appearance:

the cliffs were dotted with minute white spots that perched or gyrated—gulls and gannet: the brown plush tops of the islands were here and there dotted with sheep. I would not like the task of ferrying them out to such a place.

Stromness lies outside the main arena of Scapa Flow with its surrounding hills. To reach it by boat from Kirkwall you pass under a long file of those same plush-upholstered, brown, treeless hills, white beaches, white soiled patches of snow in the clefts and on sheltered cols.

The town itself is like a Norwegian fjord town built in stone instead of wood, straggling round the foot of a headland and a moor called Brinkie's Brae, where lived the witch who sold the winds in a bag, and overlooking a placid, weedy bay to the east, where an old cement-built hulk lies on the mud and the shore blends into marsh and grass almost imperceptibly. Southward and westward lies a narrow strait down which a twenty-mile-an-hour current runs from the Flow on the falling tide, with a backbone of ugly ripples,

and Graemsay, a minute lozenge of land, typically in brown plush like the hills, stemming it like a pier. Hoy lies behind with its domed Ward Hill, snowcapped, and broken westward into 1400-foot cliffs over which the clouds pour like waterfalls. The whole harbour is loud with gulls and as often as not lies under a driving grey drizzle.

This is the west gate of one of Scotland's wealthiest agricultural counties, and one which in early spring well dissembles its wealth. It is composed inland of those same brown hills, utterly silent and very disconcertingly vigilant, treeless—of grey level bird-filled meres with long reeds round them, where the heather has run down right to the black peaty mud of the edge, and of wide grey sea-lochs, covered with white breakers which strike the stones in a more rapid rhythm than sea waves, remarking encouragingly "Get out, get out" as they do so. Added to these natural guardians, Orkney and especially Mainland is set with most unpleasant surprises. There are solitary brown barrows one comes upon, hundreds of skeletons of birds, seals, rabbits—white birds that shoot over one's head, and standing stones and cromlechs composed of blocks as wide as a billiard table but only four inches thick or less, which have a way of sidling up behind one unnoticed and appearing suddenly as one turns. I have climbed a hill and found myself without warning at the top of a sea cliff so high that the surf was inaudible and the sea lost in mist. Orkney is the metropolis of a dead people, filled with brochs and containing the oldest village in our islands, at Skerra Brae, but its dead inhabitants have not yet quite abandoned it. Its human tenants, save for tall girls with red coppery hair, show few signs of their Pictish ancestry. They are Norsemen, the most hospitable folk I know, and the only farmers who do not threaten violence when you trespass in the lambing season, but show you the best place to pass through the fence. As the shepherd goes, terns perch on his hat and assail his face, so that they must be beaten off, and the imprudent zoologist who stirs up a colony of skuas on one of the outlying islets may have to face a very nasty situation.

Stromness itself is not Pictish. It has a Salvation Army band composed of a cornet

and a euphonium playing in an optimistic unison one-eighth of a tone apart. It is ruled by a most delightful Provost, who showed us every conceivable kindness in our visit and gave us the run of the museum of which he is curator. All the inhabitants, in common with those of the rest of Mainland, are called Isbister, Marwick, or Linklater. They repudiate the name of Scotsmen, which they do not inherit, in view of their Norse descent, and they were only known to display public violence when some years ago a member of that nation shot their tame seal in the harbour with a rifle. They are seamen of genius but farmers by choice, and do not seem to venture more than necessary into the wild Pentland.

Orkney possesses a magnificent body of legend, partly Norse and partly Christianized, a vast archaeology, a history first Pelasgian, then Pictish, then Norse, with a record of piracy and wicked Yarls unparalleled in the British Isles—a pan-Scottish expedition which went to smoke out the notorious Bairnslayers fought a gory battle down the length of the Sound of Graemsay, and witches were tried





From 'Islands of Scotland' (Batsford)

J. Peterson

Sooner or later everyone who visits Orkney comes to Stromness—

and executed in Kirkwall Cathedral. There was the famous storm witch of Stromness, an Orkney Grace Darling the recognition of whose services was a trial for witchcraft on a charge of bewitching the Sound of Hoy, and who was rescued by a sailor sweetheart under the noses of the court and executioner. There is a monastery of the Irish missionaries contemporary with Iona on the brough of Birsay, and an ancient Pictish air-raid shelter containing inscriptions relating to treasure and highly derogatory to Norsemen in general at Maeshow, where an antique curator advises you how much magnesium powder to use for a photograph. Of all this historical background I have a knowledge based only on hearsay. I went to Orkney to study mollusca, and Fairbanks was after birds. I had better stick to my last.

Before our work began in earnest, we paid a pilgrim's visit to the museum. The bird collection is vast. Among hundreds the snowy arctic gull (*Pagophila eburnea*), the glossy ibis, the ruddy sheld-drake, the eider

duck, and the gannet are all represented—the eider ducks can usually be seen sculling about the harbour in pairs, the duck respectfully following the drake. In that same harbour Fairbanks came face to face through a wave with a basking shark, and fled forthwith, as I should certainly have done myself. The museum has also a miscellany of animals and curios, but not a specimen of the celebrated great auk, last seen alive on Papa Westray in the north of Orkney. There is the scarce Orkney vole, *Microtus microtus* var. *orcadensis*, taken by Millais in about 1890, a stuffed cobra-mongoose conflict, in which the cobra has taken a couple of turns round the mongoose and is staring it in the face from between its forelegs, also a heathen idol with a piece of blue net curtain tastefully suspended before its middle to discourage the prurient. The Provost showed me the pelt of an otter found stifled in a sandbank after a storm, and seal, of which more anon, abound and breed on the islands, particularly Rysa Little and the rock called the Barrel of Butter, out in



H. D. Keilor

—which has a narrow, paved main street

the Flow, for which the rent paid by sealers was formerly its namesake. The archaeological collection is inevitably good, after the brilliant excavation and reconstruction done by Childs and his co-workers at Skerra Brae.

We set out one morning for Loch Stennis on a mission of confirmation. Some readers may know the little mollusc named *Theodoxus fluviatilis* which inhabits the Thames, the Cam and several other southern rivers, generally called the freshwater nerite. Though absent from Scotland, this creature reappears inexplicably in Orkney at one solitary station. We had much studied the deceptive maps of H.M. Ordnance Survey, in which green islands lie in untroubled blue bathygraphical oceans, and had marked the point in advance. When we reached it we could not have been more disillusioned. In the main Kirkwall road stood the low hump of a bridge. The sea came up to it on the one hand in a long conical inlet, flanked with brown weed and mud. A few cottages—since, alas, destroyed by the first bomb of the *Blitzkrieg*—stood by

it. And to our left and northerly hand lay a wide level of angry leaden water, with rush-beds in the distance, and a long spit dividing it from the more inland loch of Harray. A very long way off lay the far shore of Stennis, with a low rounded plush hill in its middle, whose outline we have neither of us since forgotten. It was obvious that no beast disliking very salty water would consort with the winkles of the bridge-side, so we hired a small rowing-boat from the nearest cottage and set out, backed by a freshening breeze and an admonition from the guidwife not to sail too far to leeward, which we blithely disregarded. In about five minutes we were half-way across, rolling dangerously, and in as long again we were securely aground about a hundred yards from the far shore. We sat in the boat for two hours freezing. Fairbanks took off his trousers and set about pushing us off. Finally we both got out, but at every push the wind carried our boat firmly aground and nearer the shore. For a further two hours we pushed, and then re-embarked, the boat heeling dangerously and creaking ominously on the stones. We lunched, and tried an expedient with the lunch tins which was useless. Even the discovery of my snail under a stone on the shoal failed to raise our spirits.

At last we waded ashore and dried ourselves cursing round a fire of heather. We were still there when Providence sent us a shepherd in gum-boots who pushed our boat and us into deep water, and bade us farewell. We began to row.

At the end of an hour we had gone a hundred yards. At the end of two, we had gone about another five hundred. The cottages by the bridge, as we glanced over our shoulders, were hidden in mist, and that plush hillside was no smaller. It was getting prematurely dark with sea mist and drizzle. That damned plush hill was actually getting larger.

We abandoned the task at the end of three hours. We were fit for neither bird nor mollusc. In a very short while we were back on the beach under the plush hill. Then we found our boat had no painter. Leaving her to bang about on the stones, we set out home.

The walk from the hill to Stromness round the loch is about seven miles, and we fore-



H. D. Keilor

Above) The Standing Stones of Stennis, the famous cromlechs on Mainland. (Below) Bringing in a load of peat, below Ward Hill, Hoy, the highest point in the Orkneys

H. D. Keilor





H. D. Keilor

Looking across from Mainland to the brown hills and quiet beaches of Hoy

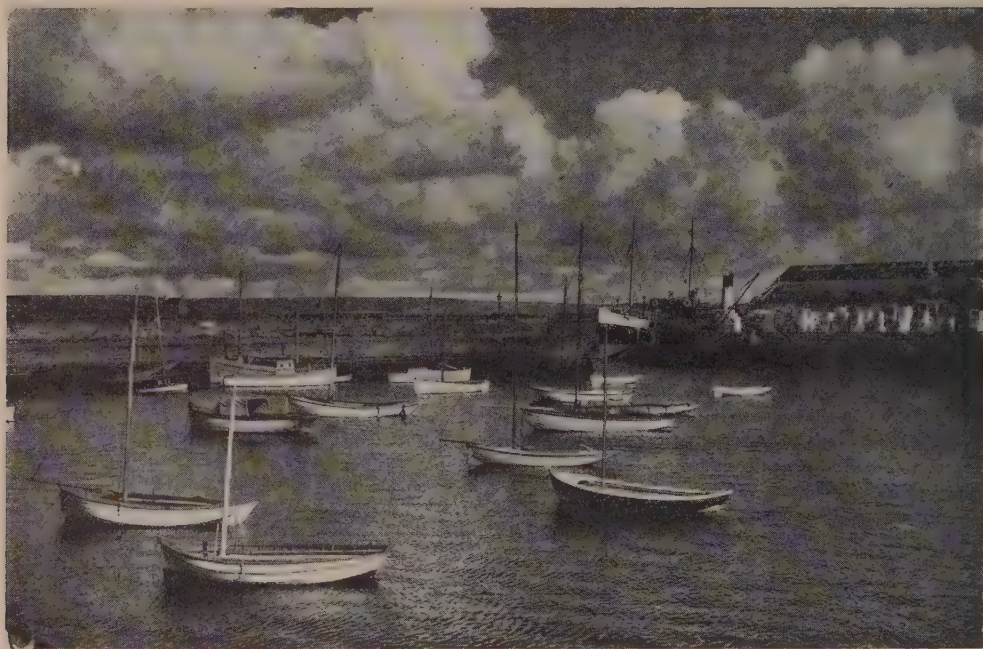
stalled a search party into the mist by telephone. We did no further sailing or boating without a motor in Orkney.

Strangely enough, these bleak islands share their molluscs with the warmer waters of the Channel Islands and the West Country. Our investigation of the beaches took us round the entire rugged west coast of Mainland on many occasions. Setting out over the golf-links we would pass the Black Craig opposite the cliffs of Hoy and walk for miles along the cliff tops, often followed by the field-glasses of the Provost watching our progress in protection of the eggs of his beloved sea-birds.

The coast here is the wildest I know. It has not the out-running rock fangs of Cornwall and North Devon, but a multiplicity of tall rock stacks and deep cove-like hollows full of boulders. These 'geos' continue far northward: Lyra Geo, where a boat of the ill-starred *Hampshire* went ashore and her crew perished because the cliffs are unscalable, is the heronry of Orkney, and long, worried necks peer out of the rock crevices: the adult birds flap at the cliff face like crane-fly at a house wall. The foreshore under high

cliffs beyond this point resembles the walls and chimneys of a fallen street of houses—one huge and so far, I believe, unscaled pile of oval base rises to the level of the top of the cliff, and is wider at its top than below. This is Yesnaby Castle, tenanted by gulls and a haunt of red-throated divers.

Further on is Yetna Geo—Giant's Cove: there is a slope of rock running obliquely into the cliff, under lumps of overhanging rock the size of cottage pianos. The people of Stromness used to come here after dulse, edible seaweed, but have left it in these days of tins to the kittiwakes. From a point of vantage on the Black Craig I had a further chance to watch those birds, behind a lump of rock significantly like a coffin at the top of a three-hundred-foot precipice, up which the sole survivor of a shipwreck is said to have climbed on one occasion, from a cave at the bottom where he spent six days. The mother birds sidle apprehensively along the ledge toward their eggs while the father, on reconnaissance, swoops to a height of a few inches over the watcher's head. The other gulls of this coast are *Larus marinus*, *argentatus*, and rarely *glaucus*. Cormorant, shag, gannet, three



H. D. Keilor

In peace time Kirkwall's fine harbour was dotted with small sailing craft

divers, shearwater and, I am told, razorbill occur along the coast.

It was between Yetna and Harra Ebb that I made my first acquaintance with an Orkney 'gloop'. At the cliff top we came to a funnel of green turf frequented by rabbits and running to a depth of thirty feet. It led us, scrambling down, to a deep corridor between high walls of rock, sloping gradually seawards, with a level rock floor, wet with spring water and green with algae. Suddenly, walking toward the glimpse of grey sky, we came to an opening out of the walls. We were on a ledge sloping seaward, a level boiler-plate perched half-way up a five-hundred-foot cliff. I had no time to admire the jagged quality of the underlying rocks before I found myself moving rapidly over the slippery layer of algae toward the edge. I contracted there a permanent dislike for such places, which was borne out by another gloop near Kirkwall which Fairbanks and I descended. It ended in a little beach, incredibly bleak and lonely, on which lay the carcasses of eighteen sheep and a goat, with the mist eddying over

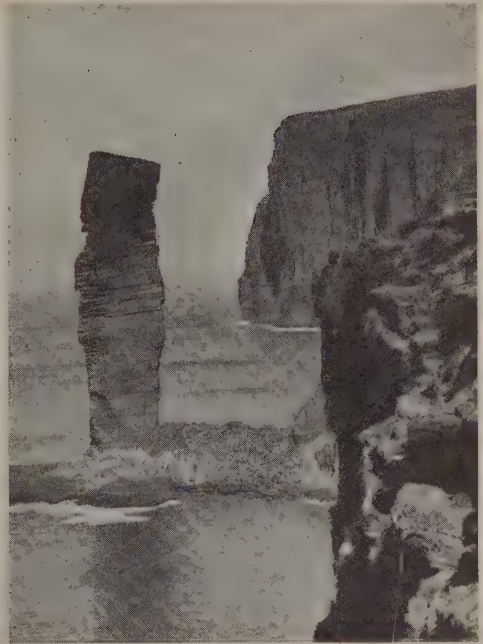
their blackened stretching skin. At no time in Orkney, even among the Standing Stones of Stennis, could one so clearly feel the presence of those islands' former inhabitants. Goats do not fall down cliffs of their own accord. In that misty, dank spot I could almost hear the jaws of Fenriswolf open. We nearly turned and ran, such was the place.

Further north is the bleak grey valley of Skaill with its sandhills and the ancient village of Skerra Brae, with a mournful loch behind. Bear's teeth and shell middens among the sand dunes reveal scrapers and pot lids now and again, and we found a boar's tusk. I would like to have met the men who hunted bear and auroch in these grisly hills. The curator, a former policeman, tells us that the builders of Skerra suffered from rheumatism—so say their bones. Further north still lies Birsay, with the castle ruins of the wicked Yarls, and the ancient monastery on the island, which is converted at low tide into a peninsula by a sandy neck littered at low tide with hundreds of species of shells. Perhaps it is among the clefts and caverns of

this tall brough that the treasure spoken of by the bush runes in Maeshow is hidden. It is a place I should have chosen.

It was here we saw our first seal. We paid a visit to their breeding-ground later in our stay, jolting and rolling through squalls of rain from Stromness in the motor boat of a Norse pirate, passing the lighthouse on the boulder spit of Graemsay, and the overgrown cliffs and quiet beaches of Hoy, with statuesque heron among them. At last we lay between Hoy and Rysa Little, with Cava and the rocks of the West Flow beyond. The wind had fallen, and a slow oily sea, the colour of deep slate, lay around us. Hoy hills were deep chestnut, and there was a little cove of dead white sand. Rysa is a bulging brown islet a quarter of a mile long, edged with boulders. We landed among laminaria, and startled a hundred sea-birds unused to human interference. A few iron-grey sheep, one dying and kicking feebly on its back, lay and stood in the dense springy heather and round the black rain-pools. The wreck of a German destroyer was perched on the east side of the island, and our tame pirates set to plundering it for scrap metal. Our friends the seals, we approached warily, on our bellies through the heather, but their scouts were too wary, and we arrived to find only broken sea urchins and a few dozen doggy sceptical heads watching us from the sea. The sealery lies toward the sound between Rysa and Hoy at the lowest and narrowest part of the island. When gunfire and bombs no longer scare the seals, and defence areas are no more, we mean to camp there some day, photographing and observing.

Stromness is a town without an inn, and on Saturday night one returns with the inhabitants in two motor buses from Kirkwall, one for ladies and the other for gentlemen and 'ladies'. We had the privilege of travelling with a gentleman who was convinced of his identity with Father Christmas, and whom we left gyrating slowly on the edge of Stromness quay. Another day we descended a tunnel like a badger earth leading under a road to the recesses of a



From 'Islands of Scotland' (Batsford)

J. Peterson

The Old Man of Hoy, a sandstone rock 450 ft. high

Pictish broch, and there were awkward moments when one of us became fixed at a depth of sixteen feet. We finally left when a farmer came to inquire "if we were from the Office of Works".

My last sight of Orkney was a misty headland from which came the puff and flash, and long after, the concussion, of fog maroons. The little old ship, which the Germans have since failed to sink, rolled toward Thurso. In Stromness harbour we passed the fin of a huge basking shark, sculling quietly about. I could not live there, with the shepherds and peat cutters who visit Rysa or the farmers of Mainland. That land is too near to the world of *Götterdämmerung* for human habitation. One looks to see something huge and incredibly grisly standing smiling among its stone circles and plush hills. Our visit added to science a new variety of mollusc, and to ourselves much food for future planning, and now and again for nightmare.

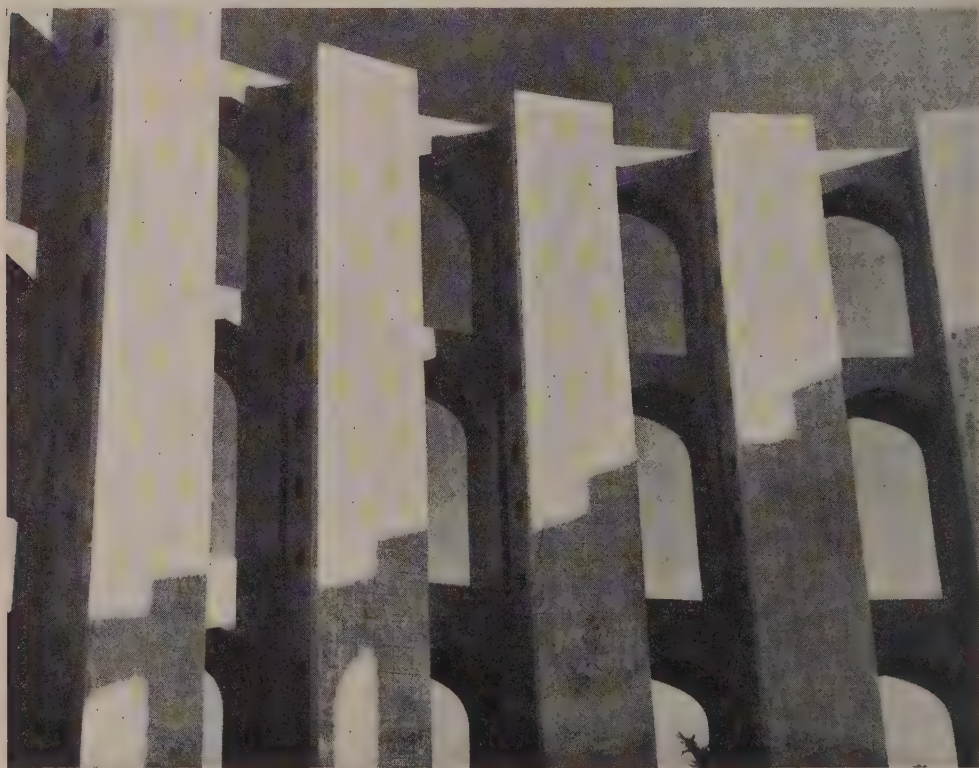
A Time Machine at Delhi

Jai Singh's Observatory

Notes and Photographs by GEORGE D. AKED

The Observatory at Delhi, built about 1724 by Jai Singh II, Maharaja of Jaipur, is the first of five which he set up in various cities of India. It consists of a group of four stone 'instruments' or Yantras. The Samrat Yantra (supreme instrument), a large dial; the Jai Prakash, two hemispherical structures; the Ram Yantra, two round buildings, and the Misra Yantra (mixed instrument). The style in which they are built appears to have more in common with a modern 'World's Fair' than with the India of his time; but Jai Singh was a serious student of astronomy, and sent his assistants to collect information on astronomical research not only from the Hindu and Moslem worlds but also from Europe. Believing that the usual measuring instruments

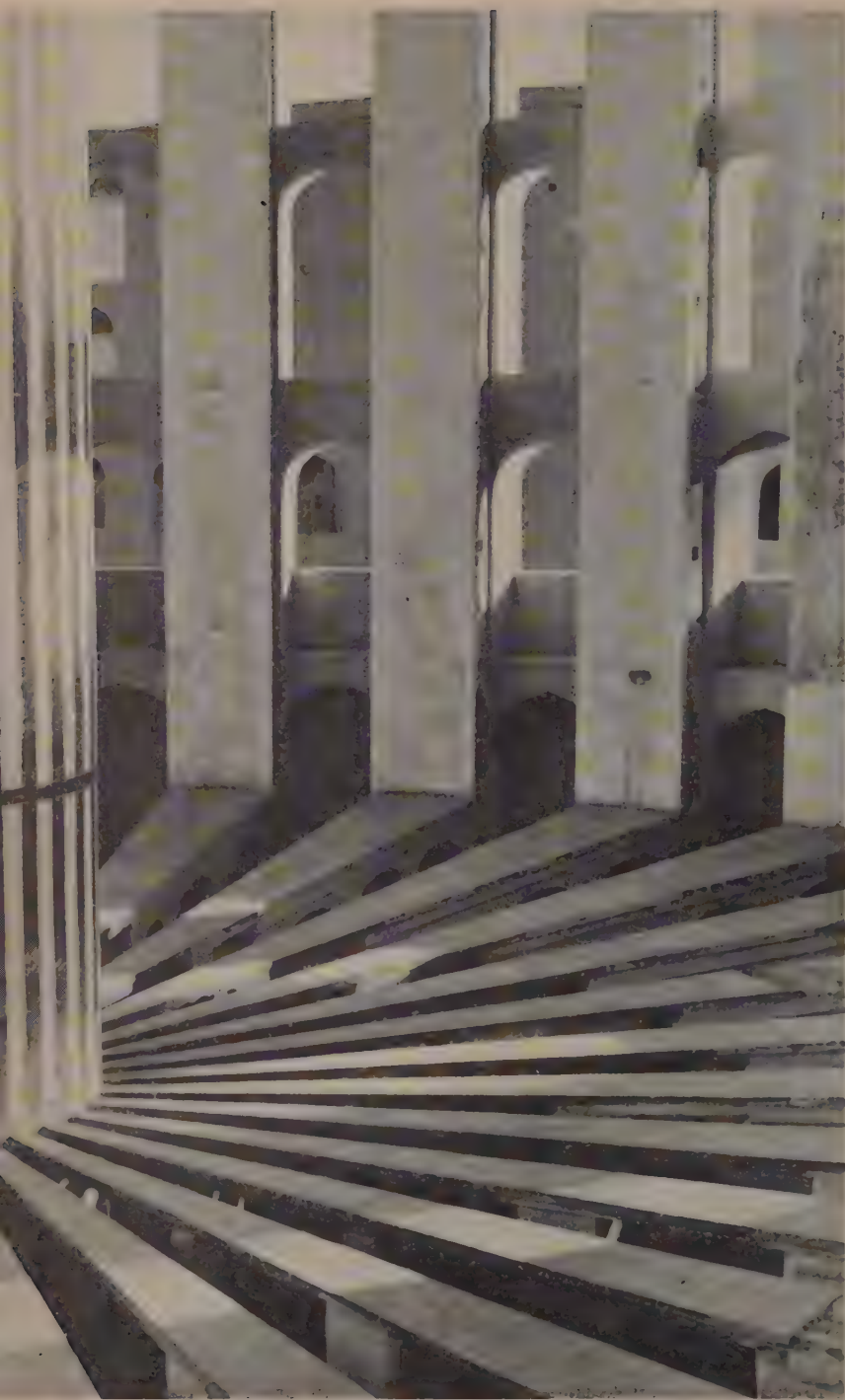
of brass were unstable and became worn, he designed these huge, graduated structures of stone and lime. At one time they were almost destroyed by the Jats, but during the last century the Maharaja of Jaipur began to restore them. Today their interest for the astronomer is chiefly historical; but their bold, clean-cut shapes have a peculiar fascination for an eye accustomed to cubist painting or the work of architects such as Mendelssohn and Le Corbusier. The reader who is curious about their technicalities will find them fully described in two books, The Astronomical Observatories of Jai Singh and A Guide to the Old Observatories at Delhi, Jaipur, Ujjain and Benares by G. R. Kaye; both are in the library of India House.



Part of the Ram Yantra, showing the notches in the windows where sighting bars were placed



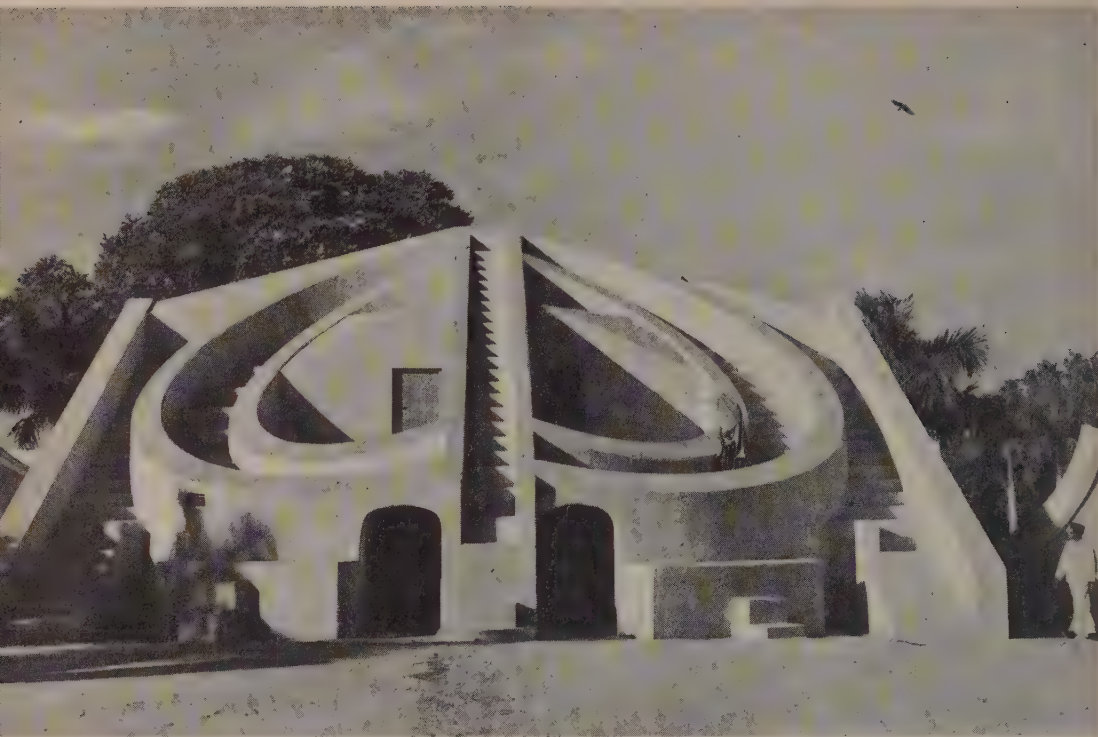
The gnomon of the Samrat Yantra, which, as in a sundial, shows the time by its shadow



(Left) Inside the Ram Yantra, the stone equivalent of a theodolite or altazimuth telescope. Each of its two buildings consists of a circular wall, with a pillar at the centre. The height of walls and pillar equals the inside radius of the building. The walls and floor are graduated for reading horizontal (azimuth) and vertical (altitude) angles and divided into 30 sectors with spaces between at intervals of 6° . The graduated walls are broken up by openings with notches at the sides for sighting bars. The altitude of heavenly bodies was thus ascertained by means of the sighting bars

(Top right) Sightseers about to climb the Samrat Yantra. From its top they will look down on the two Ram Yantra buildings and Jai Prakash (bottom right) which is another form of sundial. Cross wires were stretched across the two hemispheres and the shadow of the intersection of these wires on the concave surface of the hemisphere showed the position of the sun

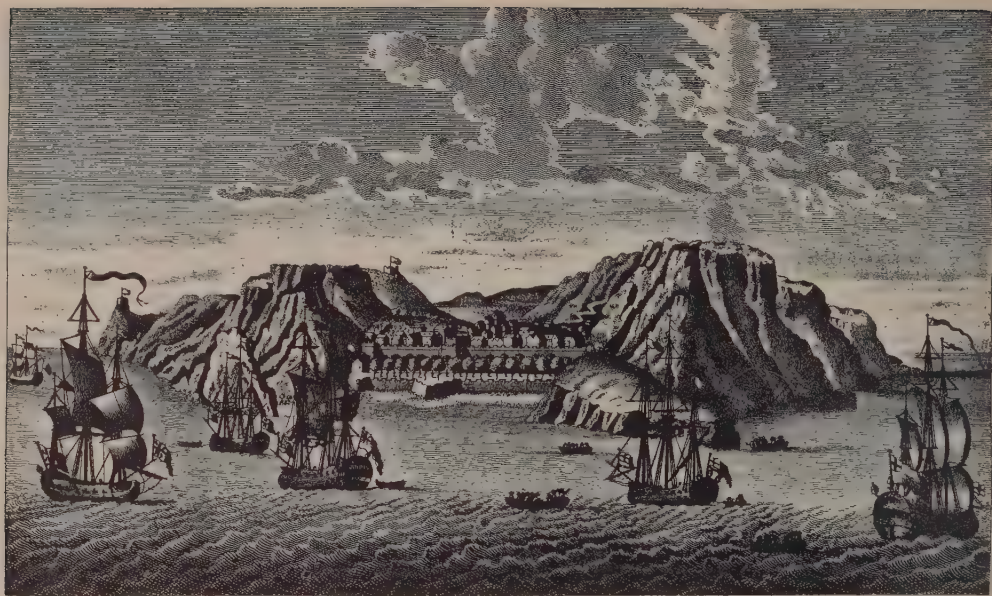




(Above) *The Misra Yantra consists of a central flight of steps between two parallel walls. On either side of these are two walls which are halves of co-axial vertical cylinders. The top of these walls are cut to form four planes which intersect a line parallel to the earth's axis on rotation, and the various angles of these planes are said to correspond to the meridian planes of other observatories—in particular Greenwich and Zürich. Any observation made at any instant in the plane of one of these circles could be made at the same instant that the object observed was on the meridian of the observatory to which the circle corresponded. Thus simultaneous observations could be insured between two distant observatories without the necessity for an accurate clock, which of course in Jai Singh's day was not available.*

(Opposite) *One of the two quadrants of the Samrat Yantra which measure the time as the shadow of the gnomon falls on them. They stand at right angles to it and are parts of a circle corresponding to the plane of the equator*





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St Helena

Island of Exile

by ANTHONY HAIGH

St Helena's isolated position as a British outpost in the South Atlantic and its association with a former dictator of Europe combine to give it a special interest at the moment. Mr Haigh describes the strange and romantic impression it makes on a visitor who comes to it with Napoleon's last days in mind

"ONLY as far as Ascension." That was the reply of the boatman who put us ashore to my question whether he had ever been out of St Helena. It was my first human intimation of the utter remoteness from the world of this island of four thousand inhabitants lost in the vastness of the South Atlantic Ocean. "Only as far as Ascension", an even smaller island a couple of days to the north-west. There was a look of resigned longing in the eyes of this man whose livelihood depended so largely on the Union Castle liners which put in regularly twice a month—once bound for England and once for the Cape—and on the very rare cruising vessels like our own, all of which teemed with curious visitors from the outside world which he had never seen, which it was most unlikely he would ever see.

"We can't earn enough to get away," he explained in extenuation of his lack of knowledge of the world.

On the day of our departure from Rio de Janeiro we had steamed for a while along the mountainous, tree-clad Brazilian coast with its thin, white line of gleaming sand, past chilly Cabo Frio and then out into the Atlantic, making slightly northwards in the direction of the Equator. But this was the southern summer, when the sun was paying his annual visit to the Tropic of Capricorn, and so it grew steadily a little cooler all that day and night and during the five days and nights that followed.

The sixth sunrise found us no longer entirely surrounded by a circle of water. Ahead of us was a single jagged rock, seeming to rise sheer



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Above) An early Napoleonic enthusiast visits the lonely resting-place of his hero. The body was taken to France in 1840. Below) A contemporary portrait of the exiled emperor at Longwood



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It is an exciting hazard to land at Jamestown, for the little boats which bring visitors from a ship anchored off the island bob up and down at the foot of the jetty like so many corks



Jamestown, described by Dampier in 1691 as "a small English town, within the great bay, standing in a little valley between two high steep mountains . . ."



A street in Jamestown: when Dampier visited the town he found that the houses were left empty except when ships arrived and markets were held; for the owners had plantations in-land which kept them fully occupied

By courtesy of the P. & O. Lines

and inhospitably out of days of unrelieved ocean. A thousand feet above the sea an undulating plateau had been built up, and we could catch glimpses of its grass from the ship. But only after search and careful study: for the first impression one gains of St Helena is that here, many days from the nearest land, nature had built for herself the perfect fortress which might well have served as a model to the robber-barons of the Middle Ages. For moat it had the broad South Atlantic: draw-bridge there was none, one must approach by boat, and in the rare places where a boat might land the rock walls of the fortress are unscalable, rising perpendicularly to a height of between six hundred and twelve hundred feet, save only at one point, where St Helena's only large valley has cleft the rock sufficiently to gain a limited outlook upon the sea.

Only one point had nature left which required defence: and here the East India Company had built a wall—only a little wall was needed—and in it a gateway, the only entrance to St Helena's one town, Jamestown, and through it to the undulating plateau behind it and above. To the left of the Town Gate stands the Castle, once the main fort of the Company and now the headquarters of the Government.

A well-built sea wall protects the short roadway which stands before the Town Gate and leads from it to the small and solid jetty of rock which is St Helena's only landing-place. Against this jetty breaks the huge Atlantic swell, rolling in from the untamed ocean and encountering here its first obstacle. Steps are cut in the stone jetty, and guide-ropes hang from an iron bar fastened overhead. An exciting hazard it is to land here, for the little boats which bring visitors from a ship anchored off the island bob up and down at the foot of the jetty like so many corks, and every now and then they must stand off a little, while a succession of rather larger waves sweep over the landing steps and send the watching inhabitants scurrying back from the spray, except for a waterman or two who hoist themselves up by the guide-ropes and lower themselves once more when the wave has slithered back from the worn and slippery stone. Quickly the boatman backs his little craft till its stern is upon the steps; two or three of his eight passengers jump one



Stanford, London

by one for the land and are caught by the arm and heaved up to the road; and out goes the boat again to a safer distance while the next great roller spends its force against the jetty.

What was seen from the sea as the only crack in St Helena's rock wall is now revealed as a little town, the only town on the island and the home of about one third of its inhabitants. As you leave the Castle, the road takes you upwards, for the valley which is filled with the buildings of Jamestown seems fearful of possible dangers from the sea, and will not linger there but is obviously keen to be climbing up to the securer heights. Not far from the Town Gate, on the right of the road, is the Post Office, which handles only overseas mails, for there is no internal postal service on the island, which can, however, boast forty miles of telephone lines. And quite a good business the Post Office does whenever a ship comes in, for visitors to the island are always anxious to send their friends letters or post-cards bearing the rare and beautiful stamps of St Helena.

Opposite the Castle is St James's church, and there is a second church higher up the valley at the extreme end of Jamestown. At Sandy Bay, on the other side of the island, religion and education are housed under the same roof where one part of a consecrated building is used as a school, and divine service is held once a month in the other part. (This Sandy Bay church is distinguished by some very fine old silver communion plate.)

The islanders form an almost feudal community quite in keeping with the impression made upon the visitor when he first catches



Philip Gosse

Gateway to the Castle, once the main fort of the East India Company, now the seat of Government

sight of their medieval fortress-island. Every man knows his neighbour, and most men are employed by one or other of the four land-owners to whom belong the flax mills which furnish St Helena with a livelihood. The St Helenians are friendly folk, and their dwellings are picturesque but very, very humble. Nevertheless, things are improving, and slowly St Helena's poorest people are being provided with better built and less exiguous cottages.

The point for which every visitor to St Helena makes is Longwood House, in which Napoleon ended his days. There are two roads out of Jamestown, and you may get to Longwood by either of them. The one winds

slowly up the mountain on the left-hand side of the town, the other climbs more steeply up Ladder Hill on the right. At the top of Ladder Hill are the quarters of the garrison, and the most direct way of reaching them is by climbing up the ladder itself—a height of 620 feet reached by 699 steps. From the top of Ladder Hill the road takes you inland and always higher, past the abandoned Alarm House, a former look-out station of the East India Company, until in time you reach the grounds wherein stands Plantation House, built by the East India Company and now the residence of the Governor.

Plantation House is of charming appear-



Philip Gosse

Inland view. Much of St Helena's sub-tropical vegetation has been thoughtlessly destroyed

ance from the outside and combines dignity with comfort within. Near the edge of the high plateau, it stands on ground which slopes gently down to a 'bay'. Or so it seems: and once a fortnight the man whom His Majesty's Government have selected for distinguished exile in St Helena—more comfortable exile than Napoleon's, it is true, and with a limited term, but exile none the less—may see from his front door the mail steamer glide into his bay. For the centre of the ground before him slopes down, while its sides seem by contrast to slope up; so that an enclosed V of sea lies before his gaze in realistic simulation of a bay. But bay St Helena has none:

the incipient valley which should form its head and the supporting uplands which suggest extension into its arms are brought up short, as if by sudden fear, and halt sharply at the ocean's edge and many hundred feet above it.

In the grounds of Plantation House lives the oldest inhabitant of St Helena, whose acquaintance I was not privileged to make. Two hundred years old he is said to be—the Governor's tortoise. My visit to the island was only of brief duration, and occurred during one of his periodical walks to the edge of the plateau. He was not expected back for about a fortnight.



Philip Gosse



Philip Gosse

(Left) *The track from Peak Hill down to Jamestown.* (Right) *Turk's Cap, the high rock overlooking the sea not far from Longwood.* (Below) *Looking down Ladder Hill onto Jamestown*

E.N.A.



Subject to the approval of his actions by the Secretary of State for the Colonies, the Governor of St Helena is almost an absolute ruler. He makes Ordinances with the consent of an Executive Council consisting at present of six members, who are servants of the Crown and therefore on his staff. An Advisory Council of the islanders, chosen on a representative basis, serves to ensure that the inhabitants shall have the opportunity of bringing their views before the Governor, and that they shall be taken into consultation when Ordinances are framed. The King has power to disallow these Ordinances, as he can disallow the Ordinances of any Governor of a Crown Colony. From the Governor in Council there is, of course, appeal to the Chief Justice; but then the Chief Justice and the Governor are one and the same man. From a theoretical standpoint, the system appears to have drawbacks: but it has been found the most practical compromise for an island of St Helena's small population.

It was on the eve of St Helena's day in 1501 that a Portuguese captain named João Baptista sighted an island in the South Atlantic 16° south of the Equator and lying fair on the route to the Cape of Good Hope. In the usual manner of the Portuguese discoverers, he named it St Helena; and so, even at its



Philip Gosse



Philip Gosse

New Zealand flax-growing is the staple industry of St Helena. (Left) Donkeys bring the flax from the hills; after being dried it is loaded onto carts (right) and taken to the mills

discovery the island became linked in name with Britain, for the saint after whom it was called was that British princess whose son Constantine, born at York, grew to be the first Roman Emperor to embrace the Christian faith. For more than a century after its discovery, St Helena was visited by people of many nations, but of course principally by men of those nations who were chiefly concerned with the eastern trade, Portuguese and English, Spaniards and Dutch. In the early 17th century, it was regarded as a sort of no-man's-land, until the Dutch made it one of their possessions in 1633. In 1659 the East India Company, finding it abandoned, took it for themselves and remained there until 1672, when the Dutch assumed possession once more. In the following year Sir Richard Munden captured it for England, and the East India Company resumed charge.

Three years later St Helena was visited by the famous astronomer Edmund Halley. At that time the East India Company were attempting to populate the island. They obliged every English ship trading to Madagascar to leave one negro there. In the middle of the 18th century St Helena was governed for one year by a man who plays a small but memorable part in every book of English history—Robert Jenkins, who com-

mended his soul to his God and his cause to his country when the Spaniards cut off one of his ears.

The road which brings you to Plantation House continues until, after winding about on the island plateau at a height of over 1000 feet, it reaches Longwood. Of Longwood House let me say no more than that it is just what you would expect from the photographs illustrating books about Napoleon's last days. The Emperor must have found the bungalow appallingly diminutive for his requirements and those of his large retinue, and during the misty months—June to December—it must have been singularly damp and dark and miserable. But on a fine day such as that on which I visited it, the place has a most attractive appearance, and commands splendid views in many directions over the island plateau, which is quite unusually green and beautiful and wears none of the harsh aspect which St Helena shows to those who look upon her from the sea.

Longwood House and its grounds were given by Queen Victoria to France, and the tricolor flies over the small French possession, which is in the charge of a French consul, who lives in a modern house built just behind Longwood House in a style which does not clash with the severe but charming simplicity

of Napoleon's last home. A *Société des Amis de Ste Hélène*, formed not many years ago in Paris, has endeavoured to restore Longwood House and its grounds to the state in which they were at the time of Napoleon's death, and many possessors of Napoleon relics of that period have contributed to this purpose, including the Governor of the island who returned some of the original furniture which at the time of Napoleon's death had been transferred to Plantation House.

The French flag flies over another piece of the island, the small circle of ground, surrounded by a ring of trees, in the centre of which is Napoleon's now empty tomb. Here among the willows (of which only one now remains) Napoleon loved to sit and to drink from the spring of clear cold water which bubbles out at one side. This is the place where he asked that he might be buried if it should prove impossible for his body to be sent to France; and here, until his body finally was taken to France by the Prince de Joinville in 1840, he lay entombed. And I could not imagine a spot better suited to be the resting-place of one who was himself so active and who brought so much turmoil and so great change into the world. Always my most vivid memory of St Helena will be that green, tree-encircled glade, shut in on three sides and open on the fourth to a sloping valley, where leaves and flowers and grass and the remoter peaks and the sky were woven together into a pattern of inviolable peace.

Continuing along the road from Longwood past Napoleon's tomb, you pass the quarters of Cables and Wireless and drop into James-

town on the opposite side to Ladder Hill. Soon you are back in the main street and see the now ruined house where the Duke of Wellington, then Colonel Wellesley, once stayed, and in which Napoleon, about fifteen years later, spent his first night on the island which he was never to leave alive.

Napoleon's end came in a thunderstorm. Thunderstorms are rare in St Helena, and the inhabitants long remembered the terrific storm which was raging on the evening of May 5, 1821. Before the storm was ended, Napoleon had died.

He had arrived at St Helena on October 15, 1815; and twenty-five years later to the day his body was disinterred from its island tomb and thereafter taken in the *Belle-Poule* for reinterment in Paris.

My white ship put out from Jamestown at six o'clock in the evening, and rounding the northern side of the island made off for Cape Town to the far south-east. The last I saw of St Helena was an hour later, when the short afterglow of a red sunset still for a few moments revealed the jagged silhouette of a dark and frowning rock, whose topmost peaks had already been swallowed up by an opaqueness which might have been either cloud or night. Soon the remaining outlines were lost, and St Helena, which for a few hours had swum into the focus of my consciousness, was now become a memory of an island of exile, where four thousand human beings live in perpetual seclusion from the enterprise, the wealth, the achievements and the calamities of their more gregarious contemporaries in the five continents of the world.

*A contemporary
of Napoleon:
the oldest
inhabitant
of St Helena*



Russia in the Caucasus

by JOHN LEHMANN



The story of how the Caucasus became a part of the Russian Empire, now the U.S.S.R., is little known in this country. It has special interest today in view of Germany's attack upon Russia and her designs upon the Caucasian oilfields. Mr Lehmann has of recent years paid more than one visit to the region and is thus able to write of its history with a lively recollection of those visits in his mind

THE story of how the Russians came to dominate the Caucasus has a special significance for English-speaking people today: the Caucasus, with its profusion of natural riches, which include manganese, timber, coal and copper and, above all, the oil wells of Azerbaijan, is not merely one of the greatest prizes that the rulers in Berlin hope to gain from their war against the Soviet, but also the area in which Russian and British zones of defence approach each other most closely. Control of the Caucasus by a powerful and expanding people has always been considered a potential danger to India, and this central fact, which caused so much suspicion and friction between Russia and Britain in the 19th century, is now one of the firmest bonds uniting them against the Nazi advance. The story also reveals how far back in history the association of Russia with Georgia goes, an association of which the most striking illustration in our time is the leadership of

the whole Soviet Union by the Georgian-born Joseph Djugashvili, generally known as Stalin.

The Georgians are only one among an astonishing number of racial groups that are found in the Caucasus and are very diverse in themselves. They seem to have been settled in their modern home, the great trough between the mountain ranges of the northern Caucasus and the Armenian plateau in the south, as long ago as the 1st century B.C., when the campaigns of Lucullus and Pompey had brought Roman influence to the eastern shores of the Black Sea. Centuries before the Russians had risen to that world eminence they occupy as a great nation today, the Georgians had developed a remarkable civilization, in which arts and letters flourished: the fame of the medieval kingdom of Queen Tamara spread far to east and west, and the poet of her Court, Shota Rustaveli—even today honoured above all

other Georgian writers in Tiflis—can claim to be one of the great poets of the world. But Georgian civilization was a flower that blossomed briefly and rarely; the history of the country, viewed as a whole, is one of perpetually recurrent, futile, savage warfare.

Two factors have been responsible for this: geographical obstacles, huge mountains and forests, which caused Georgia to break up into small rival kingdoms and principalities whenever the central control of an exceptionally able or lucky ruler was withdrawn; and the early conversion of the Georgians to Christianity. For a large part of their history they have been in the unenviable position of a small Christian outpost menaced by powerful Moslem empires. It was thus that, when the Russians were strong enough to extend their influence as far south as Transcaucasia, they came as friends and rescuers to the disintegrating Georgian States, hard-pressed by Turks and Persians.

Russia's contact with the peoples of the Caucasus began long before that, as far back even as the 10th century; but the first approach that really counted was the Cossack

invasion of the districts round the mouth of the river Terek in the latter half of the 16th century. As time passed more Cossacks poured in, and gradually the famous 'Cossack Line' was established, which was destined to play such an extremely useful part as Russia's advanced defence works against encroachments from the south and south-east. The Line was steadily toughened by the building of a series of powerful fortresses, such as Mozdok and Kizliar, all along the Terek. This process was not actually completed till 1832, but it had already proved its worth on many occasions before that.

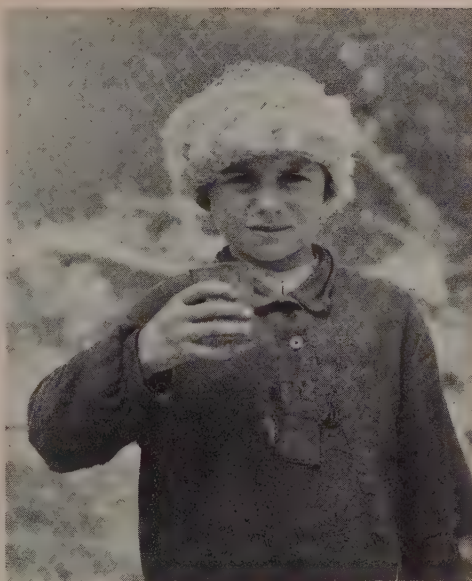
The appeal of Christian Georgia for support against Islam had echoed in the north often enough through the centuries, but it was not until the middle of the 18th century that Russia was powerful enough to take action. The first intervention was in 1769, when General Todtleben crossed the northern ranges through the Daryal Gorge, entered Tiflis, and defeated the Turks in Imeritia.

This had little lasting effect, except to show the Russians what possibilities now lay before them. The next episode had far greater



importance, for it led to the construction of the famous Georgian Military Highway, which for the next century was to remain the chief artery of Russian communications with Transcaucasia. Irakli II of Georgia had appealed to the Empress Catherine to help him resist the increasingly aggressive demands of Persia. General Paul Potiemkin, cousin of the Empress's favourite of the same name, was sent at once, and performed the brilliant feat of turning what had been scarcely more than a rough bridle path wandering among the mountains into a road that could be used by troops with speed and comparative safety. At the northern end he founded Vladikavkaz as a fortress guarding the approaches to the road, connected it by a series of forts to Mozdok, and by October 1783 was able to drive into Tiflis with secure military communications behind him.

Potiemkin left his mark in other ways as well. He was the first to introduce not only Russian colonists from the interior into Transcaucasia, but also Germans, whose settlements are still flourishing around Tiflis. He also extended hospitality to the Armenian



Pictorial Press

(Above) *An Ingoush shepherd boy on the Georgian Military Highway.* (Below) *A Georgian peasant*



Paul Popper



From 'The Russian Conquest of the Caucasus' (Longmans)



(Left) General Yermoloff (1776-1861), perhaps the most famous of the Russian Commanders in the Caucasian campaigns. (Right) Even today, as in the days when the Russians first arrived in the Caucasus, isolated tribesmen wear chain-mail and carry medieval weapons like those shown here

refugees from Turkish oppression, deliberately, in order to exploit their commercial aptitude for the improvement of trade in the country.

Potiemkin's expedition to Tiflis was followed by a period of unhappy diplomatic hesitations and withdrawals and unsuccessful military operations. It was not until 1799 that Vladikavkaz, which had been abandoned and destroyed in the interval, was rebuilt, and not until the following year that Georgia was finally united to Russia. This association was rapidly strengthened when, in 1802, Tsitsianoff, a rare and extremely gifted character, was appointed Inspector-General of the Line and Commander-in-Chief for the Caucasus.

A Georgian by blood, but born and bred in Russia, in the four years of his service before he fell in the field of battle at Baku Tsitsianoff showed as much care for education and the arts of peace as skill in military and diplomatic affairs. But many troubles were ahead. The decisive act of union necessarily implied that Russia had thenceforth to

reckon with the permanent hostility of Persia and Turkey. And that in its turn made it essential for the Russians to win over or subdue the mountain tribes who were Mohammedan by religion, and therefore only too likely to aid the enemy when an open clash occurred between Russia and her new Mohammedan neighbours. So began that long series of campaigns against the Tchetchens in their native forests and the tribes of Daghestan in their rocky fastnesses which was to absorb so much of Russia's military energies for over half a century, and to call on the services of many of her most remarkable generals and administrators.

It may seem strange to us today that hostilities between a huge and well-equipped Empire like Russia and a few handfuls of almost primitive tribes should drag on from decade to decade without issue. Modern blitzkrieg technique might make short work of such resistance. It is therefore important to remember that in those days the high mountain *aouls*, or fortified villages, on the Daghestan peaks could not be reduced by



The villages of the high mountain valleys are given their special character by the tall stone watch-towers that speak of a history of unceasing warfare

powerful artillery or by bombing from the air, and that the Tchetchens made such skilful use of their vast and unmapped forest lairs that it was almost impossible to bring them to battle: the Russians thus fought a phantom enemy, always vanishing before them, invisibly menacing their communications, stealing up unbeknown when they were least prepared, undermining morale and turning every seeming victory to frustration. It was only when the Tchetchens were rash enough to leave the protection of their ancestral beech trees that the Russians were able to seize an advantage.

The tribes fought with desperation: to their passion to defend their ancient freedom was added the fire of religious fanaticism. It must also be said that some of the Russian commanders, by favouring a policy of terror and extermination and misjudging the strength of what moved in the minds of their opponents, fanned that fanaticism to greater intensity. In the opinion of some students, in particular the famous Englishman John Baddeley, if General Yermoloff had not pro-

ceeded to extremes of cruelty that were always excused by pointing to the cruelty of the tribes, the militant religious movement known as Muridism might never have arisen, nor the leaders, Kazi Moulla and Shamil, to plague the Russians right down to the fifties of the last century.

Too great a sternness on the part of the new protecting Power also caused a growing dissatisfaction, and even eventual risings, in the Georgian States themselves. The task of the Russians, however, was far from easy, for disunity was chronic in a country where geography favoured the independence of tiny principalities and clans; and it is one of their greatest achievements that they did at last succeed in welding all Georgia together into some kind of unity, in developing communications and introducing the technique of modern life. Left to themselves, the anarchic, extravagant, artistically gifted Georgian people would never have had the means or the inclination to make such an advance.

The Georgian spirit, the passion for brilliant



E.N.A.

(Above) *The eastern coast of the Black Sea has been turned into a holiday riviera for Soviet citizens from all over the Union. (Below) A characteristic aoul (village) on the dry and treeless hills of Daghestan*



E.N.A.

The Red Army Rest Home at Sochi (below) is one of the most impressive new buildings on the Black Sea coastline



John Lehmann

clothes, wild dances, and uproarious feasts with singing and recitation of ancient ballads, struck all visitors in the old days, including the author of one of the earliest English travel books about the Caucasus, written eighty years ago. He records rather comically how hard he found it to keep on his feet and do justice to Georgian toasts as they followed one another in bewildering succession.

The same book also describes a visit to the remoter parts of the mountains, the isolated valleys where tribes existed (and still exist) who had been all but cut off from the outside world for countless generations: the Svans and the Hevsours, who wore chain-mail when they went to war and carried with them a fantastic assortment of museum weapons.

The writ of the Russians never ran very effectively among these wild peoples, but unlike their neighbours to the east they were Christians and their antagonism never bore so persistent or extreme a character. It was in 1812 that the worst troubles occurred, a year of supreme crisis for Russian influence and arms in the Caucasus. Popular revolt broke out in many places in Georgia, and very soon all the mountain clans, including Ossetians and Hevsours, were banding together against the so gladly welcomed rescuers of only a few years earlier. Luckily for Russia, peace with Turkey was signed at a critical moment; in 1813 a brilliant expedition to Shatil, the chief fastness of the Hevsours, turned the tide, and by 1816, when Yermoloff arrived to take over supreme command, order—Russian order—had been restored.

There is no doubt that Yermoloff was one of the most outstanding Russians of his age. In the estimation of his countrymen he has always held first place among the many distinguished commanders who were sent to the Caucasus; his popularity, gained not merely by successes in the field but also by a quite exceptional devotion to his men, was enhanced by a touch of eccentricity and an independence of view which included outspoken contempt for the German influence then prevalent at the Court in St Petersburg. He had the good fortune to work with a Chief of Staff, Veliamenoff, who was perhaps even his superior in ability, culture and military science. Yermoloff, however, was undoubtedly the more commanding personality.

It is scarcely possible to quarrel with the main idea behind his campaigns, that the bubbling discontent and uncertain allegiance of the tribes must be eliminated once and for all if Russia was to have security in the south; it is nevertheless equally difficult to deny the force of many of the criticisms of Paskievitch, the General sent to succeed him in 1826, who believed that if more tact and clemency had been displayed his own task and the task of those who came after him would have been far lighter, and a large part of the suffering and desolation imposed upon the simple and innocent obviated.

Supporters of Paskievitch, who was a great organizer and a wise diplomat rather than a brilliant soldier, point to the fact that quiet reigned among the northern tribes during his successful wars against the Turks. Whatever the truth may be, it is certain that in the years following Paskievitch's return to Russia, in 1829, the fiery hopes and beliefs that are associated with Muridism steadily gained way beneath the surface, and when they finally burst out in action the Russian authorities were completely taken by surprise—as they were to be taken by surprise more than once afterwards when they flattered themselves that the movement had been finally crushed. The Tsar Nicholas I, with clearer vision than many of his advisers, became deeply perturbed at the way things were going, and in 1837 attempted to stage a personal meeting in Tiflis with Shamil, third and most implacable of the Imams who led the rebellions. Unluckily, this never came off; tempers were lost on both sides when General von Klugenau met Shamil to arrange the interview; Shamil never trusted the Russians again, and it was not until twenty-two years later that he was at last forced to surrender.

During the greater part of this last phase Prince Vorontsoff, who had already gained fame in the Napoleonic Wars, was Commander on the Russian side. This wise, able and energetic man, after the indecisive campaigns of 1845-8, devoted himself to the reform of the civil administration, in which he achieved permanent success. Till 1856 both he and Shamil stood mainly on the defensive, waiting for a favourable opportunity to strike. Vorontsoff had quickly learned the difficulties of mountain warfare and the danger of meeting his opponents under conditions chosen by them. A vivid



John Lehmann

The Daryal Gorge (above) is the most romantically beautiful section of the Georgian Military Highway built by Potiemkin. The Caucasus shows an astonishing variety of landscape: here (below) is a valley of Swanetia as fertile and friendly as the valleys of the Alps



E.N.A.



Pictorial Press

Tiflis—now known by its old name of Tbilisi—has been extensively modernized since the Soviets came to power

idea of these conditions is given in Baddeley's *Russian Conquest of the Caucasus*, which describes such episodes as the following from the campaigns of 1845:

By nine o'clock the whole of the troops had reached the edge of the forest. Here a few hours' halt was called while the men rested and ate their dinner preparatory to the attack. The view to the north was one of absorbing interest to Russian eyes. Hostile Tchetchnia lay at their feet, stretching in one unbroken mass of undulating hills, covered with dense forests and intersected by deep and gloomy gorges. . . . Beyond, in the blue distance, a mere streak beneath the horizon, was Russia, Holy Russia, upon which many gazed for the last time. The road to Dargo lay along the crest of a steeply wooded spur, nowhere very broad, and in places narrowed to a few feet, and consisting of a series of long descents with short intervening rises. Abatis of giant trunks with branches cunningly interlaced barred the way every 400 or 500 yards, and the densely wooded ravines on either side swarmed with hidden foes. . . .

Prince Vorontsoff had left the Caucasus before the final submission of Shamil took place, and Russian control was at last firmly established from Black Sea to Caspian. By then terrible cruelties had been perpetrated on both sides, terrible havoc wrought among the lonely villages and mountain farms; but a basic unity had at last been created in the place of the old, historic anarchy, and the Caucasus had the chance of sharing in a more highly organized and prosperous civilization.

It was not until the first Russian Revolution began to shake the whole fabric of the Empire that trouble became serious again; and in the events of 1902-5 there were already, beside the old national alignment of Caucasians against Russians, the beginnings of a new movement in which the common people of the Caucasus felt themselves in sympathetic alliance with the common people of Russia against a bureaucracy and landlord class that oppressed them both equally. The finer and more far-seeing spirits among the Russians

were well aware how well justified was the discontent of the Georgian peasants, and in the melancholy despatches of Vorontsoff-Dashkoff, last Russian Viceroy in the Caucasus, the situation is only too discerningly analysed.

Reform, however, on an adequate scale was never attempted, and in the period of reaction associated with Stolypin's name Caucasian disaffection merely increased. It is a tragic story, because wise handling of the situation and a liberal attitude to Georgia's cultural claims on the part of the Tsar's government could have made a living thing of the historic Christian bond between Georgia and Russia. Instead of this, the separatist national movement grew side by side with the proletarian movement, and, when the 1917 Revolution came, chaos broke loose in Transcaucasia. The Menshevik experiment in independence led to economic collapse and the occupation of the country, first by the Germans and then by the forces of the Allies, each seeking essentially to prevent the oil-wells from falling into the other's hands.

It was not till 1921 that the Red Army, aided by Bolshevik risings within the country, succeeded in establishing control and bringing Georgia, Armenia and Azerbaijan once more into the same orbit as Russia. Serious revolts broke out in 1924; but since then an intelligent national policy under the direction of Stalin himself in Moscow has entirely transformed the situation. An impressive degree of cultural autonomy, an unflagging attention to social reform, the creation of state farms, the building of new schools, hospitals and rest-homes, has, one can hardly doubt, taken the wind out of the sails of Caucasian separatism. Irreconcilables there are bound to be, and quislings the Germans are sure to have ready; but if their armies reach the Caucasus, they will have to deal with a people who feel that their partnership with the Russians is on a more equal and solid basis than ever before.

Britain after the War

by E. G. R. TAYLOR, D.Sc.

What do we mean when we talk of the replanning of Britain? The answer to that large question, recently subjected to the scrutiny of an expert Committee whose Report has been accepted by the Government, is to a greater extent than is generally realized geographical, as Dr Taylor, Professor of Geography at London University, shows here

It is probably true to say that a majority of thinking people, if questioned on the subject, would declare for a planned rather than for an unplanned development of these islands in the post-war period which will presently confront us. Wide differences of opinion, however, are bound to prevail as to the constitution, powers and objectives of the Central Planning Authority which is already foreshadowed.

This is because few of us have a very clear notion of what we mean by a 'replanned Britain'. The wholesale bombing of our principal cities obviously provides a unique opportunity for the town-planner: but a mere summation of town-plans is not a national plan, although many even in high places think it is.

Town-planning is concerned merely with houses, streets, buildings, in fact with inanimate things. A national plan is concerned first and foremost with life and work, for which the streets and buildings are but the setting in the narrower sense. In its broadest sense the setting of a nation's life and work is the geographical environment—the surface configuration, climate, soil, resources, peopling and present utilization of the land. Hence a planning authority must have regard to geography, and a geographer whose life-time study is 'the inter-relatedness of things' has a right to speak upon planning.

The need for a Central Authority was forced upon the recent Royal Commission on the Location of Industry and the Industrial Population by the cumulative evidence they received of the 'wholeness' of the problem of congested industrial location and unevenness of industrial employment and unemployment. They were well aware of the tenacity with which local authorities have clung to the view that planning is a

local affair, and that no regional, much less national, authority, should trespass across their frontiers. The war has proved a solvent of all such obstacles and hostilities. We have become used to the Civil Defence Regions—more than a half-way house to true geographical or functional Regions—and the Central Planning Authority itself will be a notable milestone on the road towards social evolution, still, as Dr. Julian Huxley has pointed out, at an extremely primitive stage.

The findings of the Royal Commission, published in its Report of 1940, have been widely accepted among town and country planners as providing a skeleton policy for the replanning of Britain, and quite recently the Oxford Committee on Planning and Reconstruction has issued a brochure in which this policy is developed in its application to the Oxford Region. It is important to examine the fundamental assumptions of both documents, and we find it taken for granted that our urban population will grow as it has grown during the last few decades, that it must be dispersed more and more widely. Hence they envisage the creation of new garden cities, satellite towns, community and shopping centres, suburbs and industrial (or 'trading') estates on virgin sites, besides the establishment of large new industries in non-industrial areas.

This is the form which it is almost universally assumed development must take. The word development is in fact automatically equated to a progressive expansion, both quantitative and spatial, of the urban-industrial type of life.

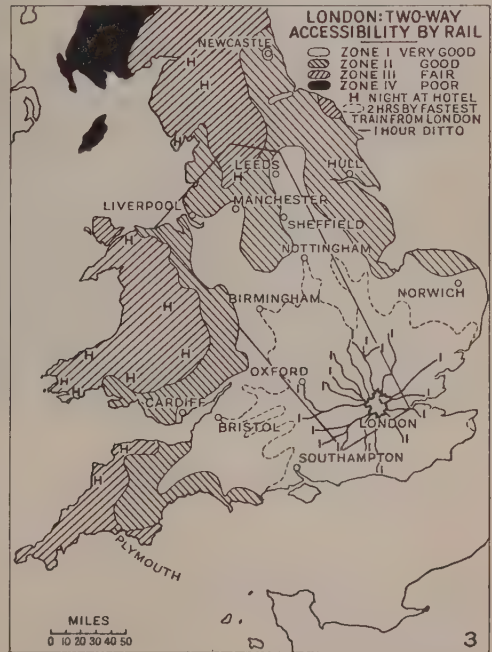
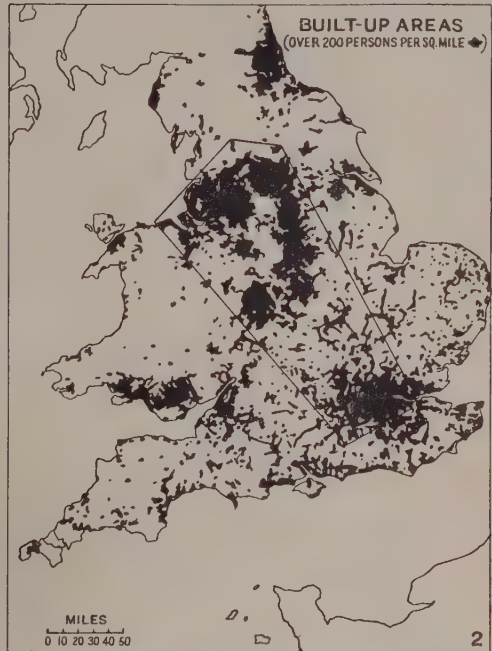
The planners envisage their task as that of controlling and guiding that expansion, so that the countryside, though perforce destroyed, is not blindly destroyed. Oxford is going to get bigger, Birmingham is going



1. Unemployment map. All plans for reconstruction must have social security as their ultimate aim. This map shows the heavy and heavily localized incidence of unemployment in the depression period of the 1930's. The coffin-shaped outline embraces the major industrial belt stretching between Thames and Mersey

2. Population map. The 20th century, and especially the last two decades, have witnessed the destruction of hundreds of thousands of acres of farm land under building-estate development. It is urgent that the remaining good agricultural land should be conserved for food production and for the maintenance of our farming traditions. This map shows the areas of urban and dense rural population

3. Accessibility map (London). The key to diversified and balanced development of cities is good accessibility. But accessibility itself may become unbalanced, as between one centre and another. London is perhaps too accessible for its own good. This map is based on facilities both for leaving and entering London—two-way movements



STANFORD, LONDON



By courtesy of Aerofilms

Above is a building pattern of unrelieved monotony—a dormitory. Below are two ways of escape: 'bungaloid growth' and 'ribbon development'. Cannot their good purpose be achieved without these deplorable results?

to get bigger, Bournemouth is going to get bigger, in fact every 'progressive' town is going to get bigger, everywhere there are to be more and more houses, more and more factories.

So obsessed are we, in fact, by the fallacy of 'bigger and better' that we ignore the true

facts of the case, namely, that at least three-fourths of new factories built must be set off against old factories closed, at least the same proportion of new houses built are matched by old houses pulled down, condemned or falling into disrepair, while three-fifths of the new population in Outer London represents



By courtesy of Aerofilms

This town, Bath, has pattern too: a pattern for urbane living. Dignity, beauty, spaciousness, a balance between uniformity and diversity, were in the minds of the planners. But they did not forget convenience

migration from Inner London, and the bulk of the remaining two-fifths represents migration from other parts of the kingdom.

It is not the gross but the net expansion of houses and industry that should engage the attention of planners, and they should face up to the lessons of the closed school and the

redundant training college for teachers. It is an inescapable fact that the rate of increase of our total population is slowing down, and in the not remote future may be replaced by a decrease.

This has its bright as well as its gloomy side, for surely the loss of tens of thousands of



Will F. Taylor

The lovely terraces, squares and crescents of the late 18th and early 19th centuries have outlived the social structure and society manners for which they were designed. But a marriage of beauty and fitness can be achieved again

acres annually from country to town can be stayed. Development should connote improvement not enlargement, better not bigger, as the story of biological evolution should teach us. Planning should be specifically directed towards forestalling and preventing the manufacture of derelict and decaying townships, the 'going down' of neighbourhoods, perhaps to the level of actual slumdom: all the evil obverse of free migration of industry and population to fresh localities where everything glows beneath the rosy light of 'new development'.

Calculations made from many angles have shown conclusively that there is ample room within the already urbanized acres for reconstruction, for rehousing and for new industry, all on spacious and healthful lines.

But this presupposes that we accept the postulate which our forefathers accepted, that town living is one kind of living, country living another. Mingle the two and both are destroyed, for they are mutually incompatible. Even mechanized transport

cannot make us both solitary and social, both rustic and urbane. Every one of us must have witnessed the fate of the bit of country, the green open space, which it is sought to preserve in the midst of a new built-up area. Too many feet trample it, too many dogs range over it, and in a year or two all that was lovely and delicate in its wild nature, whether plant or animal, has disappeared. Equally impossible is it to preserve within the suburban zone an even more valuable and characteristic segment of the countryside—a bit of worked farmland.

There is the further point, that architects and town-planners are apt to carry to extremes the idea of providing open spaces in the heart of the city. They forget that the function of the city centre is to allow of that close contact between man and man, whether partner, rival or customer, which is the essence of business transactions. Granted that unrestricted individualism has made many a city centre intolerable, wise planning can improve it, but it will not be



Val Doone

The Cotswold villages display the delightful results of effortless, spontaneous growth. Some houses are set directly upon the road, others to face the sun

wise planning if accessibility and intimacy of contact are sacrificed to the provision of wide boulevards and parks.

The 20th-century housing movement has been characterized by a flight to the periphery whereby the townsman has destroyed enormous acres of that countryside he professes to love. Whereby, too, he has created a traffic problem—the uncomfortable surge of millions to and fro across the ever widening interval between work-place and sleep-place—which provides by its degree of intractability, so experts say, the only true index to a state of congestion. Taken in this sense congestion therefore has no relation to density of population, and may exist where there is no overcrowding. It is the result of absence of planning, of the building of ‘dormitories’ without any regard to where the sleepers worked, the building of large groups of factories without any regard to the volume of traffic that available means of transport could carry.

A disastrous feature of the ‘flight to the

periphery’ resulting naturally from the fact that it was directed by the speculative development of ‘building estates’, has been its segregating tendency. Not only is there a grouping of tens of thousands of houses in one area, of scores of factories in another, but there is a social grouping according to the type of house built. Clerks are concentrated in one district, professional people in another, factory-workers in another, retired and leisured people in another, and so on. Not only in new suburbs, but in many whole towns and villages, this harmful segregation is a fruitful cause of distress and industrial depression, since where a majority of occupied persons are in the same industry, whether miners, factory-workers, shipwrights, hotel and boarding-house keepers, or whatever it may be, a slump in that industry destroys the whole town.

It is part of the graciousness and seemliness, fundamental indeed to the admirable character of the old-fashioned market town, that it is so diverse. Large houses and



The Times



The Housing Centre

Here is part of a long sequence of well-designed factories abutting on a new arterial road; beneath it is a modern housing estate. Work-places and sleep-places are carefully segregated. Notice the front gardens and the individual front gate. What are they for?

cottages, offices, workshops, inns, even breweries and factories, stand cheek by jowl along the principal streets, witnessing to the variety of the interests, activities, talents and aspirations of the town's inhabitants. The more leisurely tempo of old-town life is easily accounted for when a man has but to step downstairs or up the street to find himself at his place of business.

The planner will do well to borrow from the old-fashioned town certain ideas and ideals, even though their realization is no longer simple and obvious: the idea of diversification of occupations and buildings, of linear arrangement of frontages, of

substantial unity of work-place and home. Diversification makes for a richer cultural and social life, as well as for a less heavily local incidence of unemployment. Reunion of work-place and 'dormitory' would go far to solve the morning and evening traffic problem, but prejudices would have to be overcome, and vested interests in peripheral land speculation challenged. The flight to the periphery, helped though it was by clever and intensive advertising, represented a natural revolt from the hideousness and dirt of the 19th-century factory, the sordidness and unhealthiness of the cramped row of workmen's cottages. But this feeling of



Val Doone

The old-fashioned market-town illustrates the satisfying results of building diversity, when diversity is due not to caprice or 'artiness' but to differing individual needs

revulsion became attached to the factory as such, to the row of houses as such. And it was reinforced by that snobbish and pseudo-genteel attitude towards work which finds its clearest and most vulgar expression in the boast of a well-known wealthy sea-side resort that no industry is allowed within the borough boundaries.

But the row, the terrace, the crescent, the square, the regular or irregular frontage abutting directly on the street, in a word the definitely town style of building as opposed to the suburban type of detached and semi-detached houses and bungalows, is one that can be very beautiful, as fortunately many

survivals of a century ago remain to prove. The old mill, too, was a lovely thing, but it cannot be revived. Nevertheless the modern factory, the warehouse, the power station, the brewery, the water-tower, when carried out by modern architects with modern technique and building materials, can be dignified, even stately, in their proportions and outlines. Needless to say, too, that the outpouring of sooty smoke from their chimneys is a thing of the past. The aesthetic objection to the abolition of suburbia and to a return to the replanned and reconstructed town is without validity.

But there will be an outcry: what about



By courtesy of S.C.A.P.A.



The Housing Centre



The Housing Centre



Dorien Leigh



By courtesy of S.C.A.P.A.

The signboard announces, in the first picture, that the meadow is 'ripe for development'. The remaining pictures show 'developed' agricultural land. The factory chimneys and their smoke plumes make a pattern of strange beauty, hostile to life and health. Opinions will differ about the last picture. Does the house-end poster display give the only touch of character or is it a disgrace?

the suburban garden? Within the two million acres of the reconstructed urban areas there will be ample room for public gardens and playgrounds, for tennis and squash courts, even for some playing fields and private flower gardens. Vegetable gardens, allotments, large sports grounds, golf courses, none of which by their mere presence threaten the right use and natural beauty of the countryside, can still find their place on the periphery of the sharply bounded town or city, 'without the city wall'. The transport facilities which at present link work and sleeping place, or carry the housewife to her shopping and the children to school, would be available for travel into real country, or to the vegetable garden or sports ground during the longer evenings or at week-ends. Little summer pavilions or

chalets, gaily painted and decorated as in Sweden, might be erected upon the gardens for use on summer days.

Such a reversal of present policy and fashionable trends as a 'return to the centre' would imply can only come about if there is a genuine revival of, and care for, agriculture. Just as the bombing of cities, terrible though it is, has given an impetus to town-planning, so the deprivation of fruit and meat and cheese, even more universal in their incidence, should give an impetus to a campaign for the preservation of the soil and its fullest possible use in food production. The public conscience should be shocked at a plan for sterilizing yet more thousands of acres under bricks and mortar. It should be shocked at the sight, so common in parts of the Thames Valley, of a great mechanical



By courtesy of Aerofilms

The picture gives some idea of the immensity of the planners' problem. What is to be done to avoid this crowded confusion? Piling the little rows of houses one on top of the other would give the playgrounds and public gardens that are conspicuously wanting

navvy taking huge bites out of a rich market-garden actually under crops in order to secure 'ballast' for concrete-mixing; at the sight of an immense and ever enlarging scar in the middle of a corn field where tens of thousands of tons of chalk are being quarried for Portland cement; at the sight of a great sign-board bestriding a field of young peas with the announcement 'Factory site ripe for development'. Ballast and chalk must be dug, new factories, even exceptionally new towns such as Billingham and Corby must be built, but only in the last resort should they be allowed to trespass upon the one natural resource which we possess which may truly be termed vital because actually life-giving, namely, our good agricultural land.

Supposing it to be accepted that we keep the town town and the country country as

sharply delimited as possible, we shall find that we reap for industry all the very real advantages to be derived from concentration, not the least being the superior accessibility of the town as opposed to the country (or rather to the garden city, satellite town or suburban) location. It will be observed that our best-balanced towns, that is to say those in which diversification of industry and of population groups has come about under *laissez-faire*, are those which at the outset were naturally accessible, being situated at geographically nodal or focal points. Such points are the head of tideway, the convergence of valleys, a gap in the hills, a cross-roads on main routes, and so on. To towns in these situations the lines of communication have been continuously improved for centuries, so that they become



Cement and Concrete Association

Location of industry is not free. The water-side, the quarry and mine are of nature's dictating

natural regional centres or super-market towns, and gradually develop all those activities and functions for which their region makes a demand. Today, many of them are functioning as the capitals of Civil Defence Regions.

In the case of London, at the head of the most deeply penetrating tideway facing the Continent, the focussing upon it of the whole English road system became definitive by the 17th century, and this was followed by that disproportionate growth, greatly accelerated by the similar focussing of the railways, which has continued down to the present day. About a fifth of the total population of Great Britain is now to be found in Greater London. The effect is a snowball one, since growth of population stimulates still further transport improvements, and these in turn attract more people. They attract, too, those light consumer industries which find their most



The hideous 19th-century factory which replaced the picturesque 18th-century mill is itself—

advantageous situation in close proximity to a main market and distributing centre.

How and where this snowball effect is to be checked is a major problem for the planner. One method of attack must undoubtedly be to modify the general road and rail pattern for England and Wales so that transverse or cross-country movement is improved and the smaller provincial towns hold out greater attractions in consequence for industry.

The type of planner who finds in 'dispersal' the panacea for all the evils of congestion is accustomed to say that 'light industry', and indeed all industry that is not directly tied to mines or to the water front, can 'go anywhere'. How far this is from the truth may be judged (unless industrialists are indeed perverse) from the very clearly defined pattern of industrial distribution that has developed under a system of *laissez-faire*, with success or failure as its only guiding



Sir Alexander Gibb & Partners

being superseded, at a rate suddenly accelerated by war. Here is a modern brewery, designed by a famous architect. When factories are like this, do we need to perpetuate 'purely residential' neighbourhoods?

principle. Over four-fifths of the cotton industry hugs the western flank of the Pennines, over four-fifths of the woollen industry the eastern flank. Certain branches of engineering are more accommodating, but of the metal industries in general the concentrations in Birmingham and Coventry are notorious.

It is from the economist that the planner learns to discount the importance of the geographical factor in the location of industry. The economist necessarily works in terms of money values, and the geographical factor is often one of the imponderables, evading 'costing', yet none the less real for that. An example often cited of an industry truly indifferent to location is the manufacture of plastics, a 'light' industry in the sense that raw materials and finished product alike have relatively small weight. "It can go either to the locality where cheap labour is available and factories are few, it can go

where transport is favourable or it can go where the raw materials or even [*sic*] where the eventual customers are located", state Messrs Yarsley and Couzens in their recent Penguin volume entitled *Plastics*.¹ Yet this is not to say 'anywhere', for each alternative location suggested has its background of dependence upon geographical conditions.

In fine, the location of industry, whether in the reconstructed towns I have proposed, or in the new garden cities, satellite towns and suburbs proposed by the Royal Commission and other planning groups, is the crux of the planning problem.

Life and work—that is what lies behind a building programme. A dictated, even a restrictive, scheme of location based on insufficient knowledge and analysis may cripple industry and destroy prosperity in the name of amenity. Never was an informed and vocal public opinion so necessary as in the matter of the post-war planning of Britain.



Photographs by R. M. Lockley

The white strand and volcanic peaks of Porto Santo Island

remains, the wings of birds which the fishermen had been eating, and everywhere innumerable crabs and lizards exploring the midden. Then followed a climb of nearly three hundred feet by a crack in the cliffs to the long narrow plateau covering the top of the island.

As it was July the island burned under the long drought of summer. Such grass as existed was shrivelled up, and only wormwood, a kind of privet bush, and the amazing ice-plant, *Mesembryanthemum crystallinum*, remained alive. We had, of course, brought our own water, for the hundred acres of Chão are quite waterless at this season. Yet our feet, as we walked over the ice-plant, became wet through crushing the innumerable watery globules which cover its fleshy stems and purple flowers. We thought that the many rabbits which breed here probably rely on the ice-plant for water during the long drought.

Incidentally, during our stay of five days, we caught several of these large, almost hare-like rabbits by means of a torch and stick at night. On dissection we found that their organs had completely regressed, as if breeding had been confined exclusively to the brief rainy period of the spring. On all the other islands the rabbits were very small and stunted, and the only explanation we could obtain for the monster on Chão came from Coelho, who said he thought that the Chão rabbit was descended from tame rabbits turned down there.

Ornithologically, Chão was disappointing. The fishermen from Madeira moored their boats off the landing and slept at night in the midden of limpet shells, using this verminous couch as an alternative to the sharp volcanic rock. During their moments on land they hunted the sea-birds assiduously, climbing the cliff and squirming deep into the talus of fallen boulders, and taking all for



View from Chão of the Deserta Grande. The stones in the foreground are of a ruined house

food, or for sale at home. The prize was the cagarra, on account of its size, but the *alma negri* (Bulwer's petrel), an all-black wedge-tailed bird as large as a dove, was also taken, and so were the few young Madeiran gulls. The Madeiran fishermen, ragged and poor, yet happy and healthy in the life-giving sunshine, seized every edible thing they might lay hands on.

We camped in a roofless stone hut. Not until the sun went down in gorgeous flame over the mountains of Madeira did the innumerable black lizards retire from their avid exploration of our food store. They were not above nine inches long, but were bold enough to nibble our fingers and toes when we sat down, and ran forward with impunity to grab at food in our hands. They fairly bloated themselves during our stay, and would lie in the sun after each meal, bellies distended, and hands held up to the light in an ecstasy of repletion.

Another pest was the Argentine ant, which has spread from Madeira, where it first became a nuisance during the present century. It is one of the smallest ants, but can attack in such numbers that it can easily destroy large fledgeling birds, and carry off food wholesale from larders and houses, into which it penetrates with great determination. Only by slinging our food on wires did we escape its worst assaults.

Nevertheless there were compensations. After Portugal it was wonderfully cool, with a fairly steady temperature round about 73 degrees day and night, this steadiness being due to the constant trade wind. Looking southwards we saw the magnificent shape of the Deserta Grande, and northwards Madeira became an unreal land as the setting sun coloured its dancing peaks. In the boulders at the back of our camp was a large colony of Bulwer's petrels, which we studied by means of leg-rings. It was near hatching-

time. Both parents took turns at incubating, each sitting for two or three days at a stretch. The nestling was a black ball of down when first hatched.

At night the petrels and shearwaters held high revel over the wind-swept plateau. The cagarra made a loud sobbing wail, screaming its harsh name over and over again with a caterwauling effect. The Bulwer's petrel uttered a low, almost inaudible bark. The little Madeiran petrel, not much larger than our storm-petrel, purred and alternately squeaked with a note like that made by a finger rubbed on a wet window-pane.

There was little bird life stirring by day. A few wild canaries (dull greenish-plumaged birds), a few swifts, gulls and a pale pipit, with sea-swallows offshore, made up the list, with perhaps a buzzard and a kestrel hunting for lizards. So it was by night that we made our greatest efforts, using a powerful torch to watch the nocturnal petrels and shearwaters.

It was by night that we climbed the Deserta Grande, an undertaking which seemed foolish after it had been accomplished. But with a fisherman guide, who thought we had more money than common sense, we did manage to scale that thousand-feet almost sheer path to the edge of the Deserta Grande plateau. We arrived at the stony valley visible from Chão. It is noted for its beautiful poppies, but at this season there was nothing but dried grass and wormwood. Here, as in Chão, there are signs of human settlement in the form of stone walls bounding deserted homes and fields; but what was grown here and how the water problem was solved is a mystery. Coelho said that he thought the islands might have been penal settlements during the early centuries of the colonization of Madeira. Now these islands are entirely given over to the sea-birds, to some wild goats, to rabbits and to piratical fishermen.

To describe the third island of the Desertas, Bugio, is only to repeat the account of the Deserta Grande on a smaller scale. It has the same high crest, often covered with a mist that, where the wind has not eroded the land completely and left a desert of drifting

volcanic sand, encourages a growth of grass, bracken and gorse, the temperature on these heights being about that of the Cornish riviera.

Porto Santo, east of Madeira, has low-lying plains between its cone-shaped mountains, and here, when the sudden and scanty rainfall allows, good harvests of corn and vines are gathered. But it has arid periods, and when we arrived at the pier in the broad sandy bay, the whole island was parched white under the summer's drought. Life seemed to slip by easily in the neat and sleepy little town, but the march of exploration along the sandy paths under a burning sun was too exhausting. We drank much of the Porto Santo water, sold in bottles and labelled as "most certainly the beste for affection of the intestine".

We took boat again and visited the off-islets of Porto Santo, the chief of which is Baixo. Here are limestone quarries, and a crew of diggers under the command of Señor Francisco Andrade, who knows New York and Paris but is happiest in his little cliff-dwelling in the rocks of Baixo. The workmen carry the stone in containers balanced on the neck and head, and climb down three hundred feet of winding cliff path to load the cargo-boats which take the stone to Madeira.

We picked up many shells on Baixo, which later proved to be that of a snail (*Hemicycla subplicata*) only known from this island, and, since 1848, extinct. Probably the perfect condition of these sub-fossil shells is due to the dry climate and the calcareous nature of the soil of Baixo. They looked as if, so to speak, the snails had only just stepped out of them, but they had been lying there on the surface of the island for nearly a hundred years.

Since the war Madeira and its islands have suffered through the curtailment of the large tourist traffic which visited Funchal, and radiated in cars and boats from there. But the off-islets have always been independent of visitors. They exist on sunshine and the produce of the land and sea. While the war lasts we shall think with longing of the peace and warmth and beauty of those islands, and afterwards, who knows? Perhaps we shall go back.

Provence in Sunlight

A Memory of 1938

by G. W. STONIER

ON the point of taking a holiday, I find reverie turning south. The Channel is crossed, an early start made from the Gare de Lyon. Beyond the plain of the Midi goes my *rapide* till it reaches hotter skies and a landscape of little stony hills and olive trees and vines. It might be, at a glance, Greece; it is—even with its new label, “Unoccupied Territory”—Provence.

We are case-hardened against pity, and when I think of Provence there is small room for the sufferings of its inhabitants. They are better off than the Chinese, the Poles. They produce fine crops, and part of these will be stolen. They will go short through the winter. Provençals everywhere will be talking bitterly, just as, in the year before war, they asked bewildered questions: “Is the war coming? When will it come? Can no one do anything to save us?”

I remember with pleasure and calm regret landscapes, living, the beauty of the past, faces, accents, people in fields and in the town; and—I have perhaps a little feeling left—one or two of the people to whom I talked in that year before the war remain, making me wonder what has become of them.

LES BOULES, AVIGNON

Once a term the French master, a razor of a man with pride of accent, used to say: “Close books, boys; it’s end of term and I’ve a surprise for you.” The surprise, which everyone had counted on, was a phonograph with a single wax cylinder. Handle wound, the crazy old thing spluttered like a firework, and out of this cackle we would gradually disentangle words and a tune:

Sur le pont
D’Avignon,
On y danse,
On y danse. . . .

You probably know it. *Sur le pont. . . .* I have looked since for music out-of-doors, in

the hurdy-gurdy, the *fêtes champêtres* of town and village, and though I’m not one for legging it, still I think a bridge the best place for dancing. Twenty years after my school time I paid a first visit to Avignon. Bee-line for the bridge. My guide-book had warned me it was only a bridge-head, four arches long, one franc to pay, but I expected more than Bénézet’s stones lifting over the Rhone, something more, a flutter from the old phonograph. . . .

My disappointment, perhaps, spoilt me for Avignon. Too many eyes had looked this town over, and were still looking; too many tourists had paused, trudged, sweated, bought postcards of the view and sat to their aperitives before the view. Tourism—no getting away from it. Charabancs piled together in the Place Carnot at all hours of the day; the road from the station (link with Paris and Marseilles) poured its passengers at regular intervals.

And it was a French tourism—garish, noisy, indefatigable. During the day-time I used to escape into the countryside, and only at dusk I’d return to prowl round this old town, walled like Chester, to catch the silhouette of towers and of the Palace of the Popes.

The station was outside the town and the Rue de la Gare led straight to one of the main gates, with a café posted on each side. A rival wireless in each made the air hideous; by arrangement, they kept to different programmes, so that customers should have the choice. Charleston and Moyen Age. By day—such was the hubbub—one hardly noticed it, but at night it was frightening.

I used to walk away and round the city walls. In dust alleys between wall and river, the townsmen were enjoying their

(Opposite) *A tree-shade such as you see in England: but notice, beyond, the almost windowless houses in the sun*

(Toni Muir)





Toni Muir

The Provençal shopkeeper alternates between elegance and ramshackle modernity. This store of all sorts is haphazard. If it had been a greengrocer's fruit would have been arranged like jewellery

evening *boules*. This is a very different game from bowls, more varied, more enterprising, more dramatic, and needing only space of ground and the skill to surmount hazards. The players pitch instead of rolling their *boules*: globes heavily cased in metal. One of the most deadly shots, which may transform the whole position, is a full-toss delivered by the player as he runs up to the line, and, exactly aimed, it will kick the enemy *boule*

flying. When the game is played four-a-side, one player perhaps will be an expert at the knock-out toss, while the others will lob-and-roll more delicately for position.

It is a perfect game for watching. Strength and cunning are the two qualities we admire most in sport, and I could spend hours—and did—following the antics and cries of the *boulemanes*. They were splendid in encouragement, in humour and (sometimes)



Toni Muir

On the whole the southern French are an easy-living race. The priests come of the people and remain with them—very different from the hated ‘blackbeetles’, for example, of Spain

violent abuse. The young men stripped to the waist achieved carelessly the attitudes of the discus-thrower. Two types seemed to predominate. One was the burly pink moustached workman common to all parts of France, the other a diminutive dark leaper descended (so it's said) from the Phocéans who once landed on the coast where Marseilles stands today. Both played well, though in different ways, and their mingling gave fire

to the game, as it has to this whole breed of the Provençals. And they went on playing after the lamps were lit.

THE HOTEL AT ARLES

You arrive at a strange town. First thing: look in the *Guide Gastronomique* (useful book) for the cheapest recommended hotel near the station.

Hôtel du Midi, Rue Amédée Pichot.



Toni Muir

In Provence, workmen, like everyone else, used to enjoy their evening drink in the shade. L'heure de l'apéritif, by the way, is said to have been one of the reasons for the collapse of France

A suburb of Cannes has the name Super-Cannes: too much of Cannes is super something or other. The guide-books and thrillers have overdone this 'fascinating littoral'. There remains the harbour (opposite), modest, lovely with masts and trees, where as you see the common folk walk





Toni Muir

The Provence vineyards are as beautiful as our Kent hop-gardens. For some reason (biblical associations, perhaps) the grape has a romantic appeal denied to hops. The growing vine is—

It's in a winding cobbled street, with white plaster and a sign outside. A generous smell of cooking floods the pavement at ten in the morning. Clean check cloth on a table by the door. This will do. The guide-book says "*confort moderne*", meaning a plug that pulls.

Madame with a birdlike energy, fresh and nervous, offers the choice of a bedroom on the street (commanding, that is, the bedroom of the little hotel opposite) or over 'the courtyard'. The courtyard is a tiny cloister dazlingly cut by the sun on one side, dark on the other. I am led across this court to a staircase. In shadow I notice a very old woman preparing vegetables. All through my stay at Arles this old woman was sitting

in the cool of the cloister, bent over her vegetables, paring, scrubbing, slicing. I couldn't get up early enough to surprise her off duty; and during the day when I was out sightseeing, the thought of her would return. Monsieur and Madame, to whom I talked a good deal, never spoke of her, though they told me all about their son in the north. There are many such aged grandmothers who end their lives as servants to their own families.

"A friend of mine," I mention for the sake of something to mention, "put up here last year; give me his room." I describe him; Madame recognizes at once. "Yes, yes!" she exclaims, delighted, "No. 7 at the end of the corridor." We enter a large room lit, as

—smaller than most people suppose. Chateauf-neuf-du-Pape and the less hallowed vintages may have trickled away into the cellars of the few, but we can all look at these pictures of vineyards. This is a typical grape-picker: a man of the countryside and not, like many of our hop-pickers, casual labour from the towns



Toni Muir



Toni Muir

Some of the hills in Provence are bare except for an occasional tree among the rocks. The valleys, though rich, are spare of shade. Even this cool-looking road would be hot to walk along in summer

always in the south, with a dead light like ice-cream seeping through the shutters. Creaky floorboards, bare washstand, wallpaper of an ugly green, and a bed big enough for Solomon and his wives. I look closely at the wallpaper, because my friend had told me of a terrible night, with a giant mosquito squashed on the wall. Yes, there's the splodge, purple against green.

"It will suit," I say formally to Madame.

It all suits, the wallpaper, the old woman crouched below, the price (15 francs a day), the smell of cooking, Madame's eagerness, the cat of all sorts asleep on one of the two chairs in the hall; and outside, the dazed streets, the sand-coloured town in the sun.

Arles is old and unspoilt within its walls—unlike Avignon, Tarascon, so many rampart towns with names. Arles, for me, is Provence itself. In the ten days spent there I feasted my senses as never before or since. The sun—beloved of Van Gogh—enters into everything: sun-baked tiles, sun-crumbled stone, sun-bursting apricots and grapes in the shops. You meet it in the morning, with low trajectory melting into an almost terrible clearness of the air. At midday: deserted streets, only a dog picking its way across the hill of the Roman arena, while a few road-menders

lie stretched in shade on the quay. Afternoon: the Promenade des Lices, vibrant even in the shadow of its immense rows of planes; the public gardens, shrubbery set against classical ruin, the old wearing their rusty black and sitting near children at play in a small sandpit. Evening, *l'heure de l'apéritif*: the workmen begin to amble home, women stand at doors calling to one another, and the light yellows. And at night the moonlight cuts down on ramparts and cypresses like steel.

That's the cycle of fine weather in Arles. One eats sunlight with one's dipped breakfast roll, one smokes it and drinks it, one feels it in a lizard alertly still on a wall, a *cigale* trilling under a tree-shade. One knows it by contrast in the icy gloom of the church (once the cathedral) of St Trophime.

My memory of Arles is fitted together with pictures as clear as glass. On market days the streets were packed with booths and buyers; it was a fair as well as a market, and everything from grape-juice to necklaces, ballad-sheets to gibbering poultry, was for sale. One afternoon the Roman amphitheatre opened its gates to the native *corrida*, in which local heroes snatch cockades from the bull's forehead. I remember too, "as though



Toni Muir

Delightful villages are perched on hills in Haute Provence. Looking down on this one we might not notice that it is high above the road, from which the houses appear as in the second photograph

it were yesterday", a mule being sheared on the quay. All day it went on, to the delight of all who passed (and who didn't?); and devilish smart the mule looked by the end of it.

At the hotel we ate our lunch in a low-ceilinged room crowded with tables. Madame carried dishes through the door from the kitchen, and did the waiting herself; through the doorway, from time to time, we glimpsed Monsieur, a small, squat, smiling man like a Disney dwarf. We who lunched every day so cheaply and well were (besides myself) a clerk from the post-office, two young lawyers, a commercial traveller, a honeymoon couple. The inevitable loud-speaker roared and whistled in the hall so that there was no need, no possibility even, for the separate tables to close in conversation. But after a few days the dining-room suddenly became empty; the 'good season' mysteriously vanished. Madame, with little now to do, fluttered round and twitted. Monsieur swore. I gobbled silently. Instead of the usual lunch-time music brayed over the air there came Daladier with his strong-man speech to the nation. Monsieur stood at his kitchen door to hear. "What do you make of it?" they both asked me when it was over.

"Is he the man? Will it be war?" etc. I held out, sincerely or not, hopes. Madame had the best word: "It's such a terrible long time coming. . . . But," she added unexpectedly, "perhaps Mr Eden will find a way." Many French people of that time looked up to Mr Eden.

I was in mid-holiday, walking out every day into the plain or the hills, intoxicated with the landscape, the cypress rows screening small vineyards, the whiff of crushed grapes from passing lorries; and, at the moment, nothing from the future could touch me.

But Monsieur and Madame, in their unexpected minutes of standing idle, felt and dreaded the war coming. "Next year," they pleaded as I said goodbye, "next year, you'll be back?"

EASTER MORNING IN AIX

It is 35 miles by road from Arles to Aix. The bus clatters along a bare road with occasional avenues of shade, and it's not till one is almost in Aix that one realizes how the country has altered. A Van Gogh landscape of twisting cypresses and cornfields has been exchanged for a Cézanne, mellow-toned and shaped by rectangles of rock.

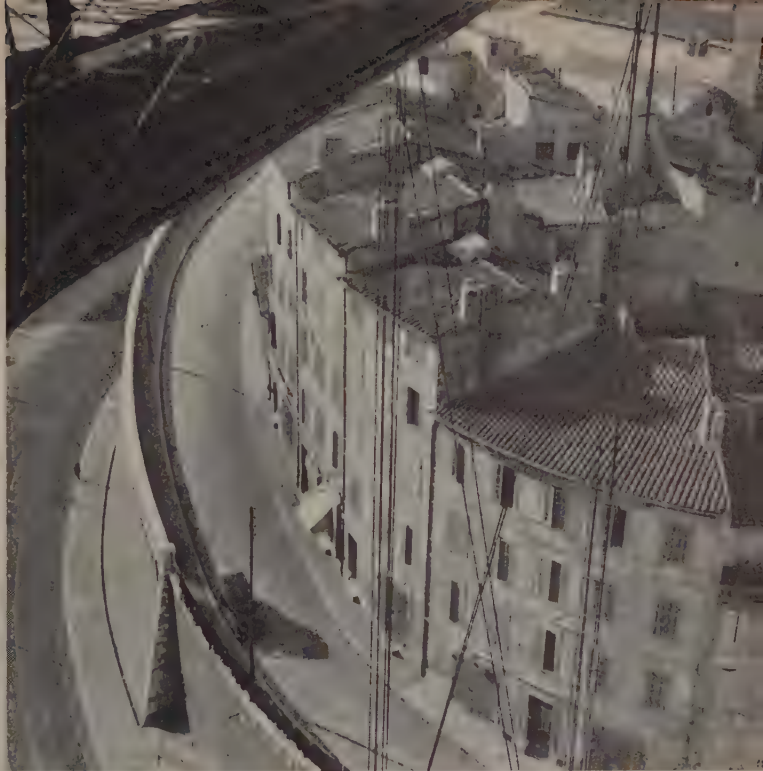
Aix itself is delicious: a small university



All harbours are enchanting. The life of Marseilles (opposite) flows along one main street leading down to the harbour and along and round the quays. There's no front, properly speaking, and though sea-excursions and pleasure boats are many (here you see them spectacularly laid out), the tourist finds himself more often thinking of distant travel. Morocco is only a couple of days journey across the sea; the cigarettes, government-controlled, reek of Africa; Tunisians, negroes, Chinese crowd the docks

No one would pretend that Marseilles has a lovely or even an impressive sky-line. But, approached, it has a garish charm. It looks important, it looks busy. The hills of the town, often with churches on them (glance back at the photograph on the opposite page), rise in the middle distance, and beyond the smoke-haze in the sun there are the mountains. And remember the tints: what shows coolly here in monochrome is in fact sky and sea as blatantly dyed as a coloured postcard

(Right) Parts of Marseilles are more hideous and depressing in their dereliction than any other large town in France; but these for the most part are out of sight of the sea. The visitor of back streets, perspiring and faintly appalled, picks his way to the harbour, then all is changed: sea air, prosperous marine buildings, a clean arc of house-fronts such as you see above





Toni Muir

town and modest spa lovelier than any except the unbricked parts of Oxford. The same sun stares down on Aix as on Arles, but here it is turned aside, broken up in innumerable shades and little courtyards with fountains. All day long, from dolphins and chinless lions and swans' beaks, the tiny trickle of water.

I was with a friend in Aix on Easter morning. We walked through side streets where outside the shops there hung, from old custom, garlanded carcasses of meat. Zola's accusing friendly head looked down in bronze—beside of course a little fountain. The Satap buses were springing off every quarter of an hour for Marseilles. We called for letters at the post office, crossed the riotous flower-market to sit awhile in the Cathedral of St Sauveur, where candles pointed the darkness and the boys sang in quiet vinegary voices.

Outside again, people were beginning to circulate; the day of the National Lottery was at hand, and lottery tickets and Easter eggs tied with ribbon filled the windows.

As we sat drinking our lunch aperitives the wireless came on without preamble. "Mussolini has invaded Albania by land, air and sea." I felt the dread that had failed to touch me at Arles, I remembered Madame's words, "It's a terrible long time coming," and this was only the beginning, a curtain-raiser no sooner on than ended.

The Italian frontier was not so very far away from where we were sitting.

That night the weather broke. Instead of the bull-frogs trilling from a suburb and the drip of fountains—thunder and rain. The wind came down like an air raid on Aix.

THE STATUE AT CANNES

Up and down the promenade they go, the rich without reason, the blue-train mannikins, the black-spectacled mocking the blind. I

Marseilles has its reputation for 'dangerous' streets from alleys like this; at night it would be dangerous

looked at them almost with affection. They were finished. This was a positively last appearance.

Cannes has a delightful harbour. Among the trees and masts and oyster restaurants and chairs with umbrellas there is a statue of an English gentleman.

Lord Brougham (1778-1868) invented the carriage with his name, and also, towards the end of a life of law and politics, discovered Cannes. It was then a small fishing village. It owes its prosperity to this brilliant and most unamiable of eccentrics.

NIGHT IN MARSEILLES

Commercial, smart and vile, dilapidated even in peace-time, Marseilles has the attraction of restlessness, of a post in long-distance travel, of sahibs sweating in clanking trams and lascars sweated on the dockside; of crime, of political assassination (King Alexander was murdered in the Canebière). Bouillabaisse, with its reek of saffron and sea-water, is eaten on the quay; saffron mixes with dust and scent in the crowded streets. It is a dirty Mediterranean that washes along the shore.

Marseilles is a city of hills; the St Charles station is approached by a vast skirt of steps; the basilica overhangs the docks on a perilous cliff; another rocky hill has crumbled away toppling boulders and edifices to its foot; the zoo, housing innumerable peacocks and Amherst pheasants, can only be reached by the steepest of inclines.

Marseilles is a city of night. At night the pleasure-seekers and the crooks get busy, there is a garish activity which goes on into early morning. The weary tourist tries to sleep in the matchbox cubicle of his hotel; but music, animal cries, the mosquito keep him awake. I was unable to sleep during my two nights in Marseilles. Things would quieten down, and then a café band would wake to new life or passengers would unload from a train to come knocking on the doors. The atmosphere of the place had induced me to pick up half a dozen crime stories by Simenon, one being about Marseilles itself;

but the first night my reading was interrupted by drama in the flesh.

From the baker's shop below my window came a volley of appalling yells, and I imagined murder was being committed. My reaction, I am sorry to say, was to note that my door was bolted. Then a drunk man waving a long knife ran into the street and fell on his knees weeping and upbraiding; he was followed by a woman who called loudly for the police. The man, it seems, in a paroxysm of nerves, was threatening suicide for something the woman had done, or merely perhaps because, being married to her, he had suddenly been appalled by the monotony of their life together.

At all events, he had reached the stage of being dangerous to himself and others. Two policemen stalked him under the trees. He yelled and ran a little way, then once more fell on his knees weeping. This chase went on for an hour, dying down and breaking out again in new and distant quarters of the town. Such outbreaks, I learnt from the porter next morning, were not uncommon in Marseilles; he himself, for example, had slept through it though his room was on the street level, and besides, this particular man, a very skilful confectioner, was always losing his head and vowing destruction. The police had a technique for dealing with him.

This helped to reassure me, but still I did not lie easy till I had left Marseilles. Even as I ate my bouillabaisse on the quay in sunlight, I could see with a corner of my eye the Mont aux Morts and the island prison of Château d'If (familiar from *Monte Cristo*), a dark shadow out in the bay.

* * *

There is nothing to round off these reflections. They remain in the file marked 1938-9, eve-of-war memories, flying chips of the past. I haven't tried to "make up my mind" about Provence. I've left out the history, much of the landscape (but there the photographs help), and put in the sunlight and the towns. The sun! After all, that is what drew Van Gogh and the blue-trainers, Lord Brougham and the first Cook's tour.



Paul Popper

Baalbek, City of Ruined Temples

by CONSTANTIA RUMBOLD

The ruined temple group at Baalbek though much less famous than the Acropolis of Athens is only a little less magnificent. Miss Rumbold, to whom it is familiar ground, recalls the ancient city's part in the stormy history of Syria and its associations with the worship of Baal, of which it was for so long the centre

AT no time in history has the word Syria had a very precise geographical significance. The various lands included in the term such as Commagene, Cyrrhastica, Phoenicia and Palestine each retained its distinctive status. Under the Graeco-Romans the only province properly called Syria lay in the Orontes valley. Under the Turks, Syria meant the province of Damascus exclusive of the vilayets of Aleppo and Beirut and the sanjacs of the Lebanon and Jerusalem.

In its widest sense it now comprises all the

land lying between Turkey in the north and Palestine in the south, and is bounded on the east by Iraq and on the west by the Mediterranean. This land as we now know it has been battle-scarred for centuries. It has known invasion by almost all the great armies of history.

The central mountain mass of this land is the white limestone range of the Lebanon, so often capped with snow. A broad valley, lying 3000 feet above sea-level, known as the Bekaa, splits the great range in half, pushing



1941 Mure

Inside Baalbek the most famous temple of Baal is in these ruins of once prosperous Palmyra, through which the troops and tanks of the British Empire lately passed in their victorious campaign



Ronimund Bissing

Summer brings the residents of Beirut and Damascus to Baalbek, for it is cool and healthy high up in the valley of the Bekaa. Mulberry and tobacco, olive and vine grow in the gardens irrigated by these canals (left). (Right) A grove of poplars. (Opposite) The Grand Mosque, built from the stolen stones and columns of fallen temples, is itself a ruin now. Grass grows up and round it and lizards play among the pedestals and on the fallen pillars of Assouan granite

the Lebanon to the east and the Anti-Lebanon to the west of it. At the head of this valley the vast golden ruins of the ancient city of Baalbek lie amid groves of poplars and irrigated fruit gardens.

Little is known of the early history of Baalbek. In Graeco-Roman times it was unquestionably foremost among Syrian cities in beauty and grandeur of architecture. The impressive ruins that now remain all date from that epoch. It can be assumed, however, that the aboriginals of the Bekaa first established here their chief centre of Baal worship.

The Semitic word *Baal* signifying primarily lord, ruler or inhabitant, indicates that the 'Baals' worshipped in different localities were not necessarily one and the same god. The difficulty in determining the character and attributes of this deity mainly arises from the original sense of the word. The title, becoming a proper name, was appropriated by different peoples to denote different divinities. Accordingly, the Baals cannot be regarded necessarily as local variations of the same god like the many Virgins and Madonnas of Roman Catholic countries, but

as distinct deities, each, however, enjoying very similar attributes.

Baalism was a nature worship. The Baal, as god of reproduction and fertility, was entitled to all the produce of the soil and the first fruits of every season. Joined to him was the necessary female figure of Astarte, and the wide sense and meaning of the word 'reproduction' led to a cult of great sensuality and licentiousness. On the summits of the hills and the mountains and under the green trees flourished the cult of the givers of increase which, in their primitive minds, was thought to secure a rich harvest of crops. From this common attribute of all Baals, it was not difficult eventually to identify them as mere forms of one supreme power of nature, in particular the sun.

A local legend ascribes the foundation of Baalbek to Cain, who is said to have fortified it as a protection against the vengeance that he feared might overtake him following his murder of Abel. He is believed to have peopled it with giants who perished in the Deluge. Another story told in Iraq is that Nimrod "the mighty hunter" settled in Baalbek and built a high tower reaching to the



Gibson-Hill

Rotmund Bissing





Ronimund Bissing

The Temple of Jupiter-Baal. Amber-white and richly crowned, six of the fifty-four mighty columns of the temple peristyle still stand erect. In the court below, fallen blocks and scattered masonry lie where the forces of nature have hurled them



E.N.A.

The ancient Acropolis was shored up with huge walls and formed a terrace on which the temples were built. Roman masonry can be seen in the foreground while the distant walls are of Arab construction

skies in defiance of the gods. These are but tales, and there are many more.

The city certainly lay on the great caravan route and must have been a halting place for travellers. Abraham would have passed that way on his trek from north to south. According to very ancient oriental traditions, Solomon, too, erected temples to Baal in the city.

No real light is thrown on the place, however, until the arrival of the Greeks who, seeing in the god Baal a resemblance to their sun-god Helios, renamed the place Heliopolis. The Romans, following soon after, in the 1st century A.D., turned Heliopolis into a colony and the foundations of the present sanctuaries were laid by Antoninus Pius. It was dedicated by Septimus Severus to Jupiter together with Mercury and Venus,

but was not completed until the reign of Caracalla.

As one approaches the scattered little town, half buried in a grove of poplars, the temple area stands out against the snow-capped range of the Lebanon in all its beauty. Two out of the three temples are built on a vast platform of golden stone, the Acropolis, which dominates the town. Six magnificent columns crowned with Corinthian capitals, supporting a very rich frieze, all that remain of the peristyle of the Temple of Jupiter, rear their great carved heads sixty feet towards the sky. Man looks dwarfed beside such grandeur.

In the 7th century John Malala of Antioch wrote these words: "Aelus Antoninus Pius built at Heliopolis of Phoenicia, in Lebanon, a great temple to Jupiter which



Ronimund Bissing

In the Temple of Jupiter-Baal. Limestone from the local quarries and granite from distant Assouan were used for the buildings in the temple area. The Altar Court was richly ornamented—

was one of the wonders of the world". As one approaches the Acropolis by way of a monumental flight of steps to the Propylae one may see an inscription on the portico which reads as follows: "To the great gods of

Heliopolis. For the safety of the Lord Antoninüs Pius Aug. and of Julia Augusta the mother of our lord, the Castra and Senate, devoted to the sovereigns, caused the capital of the columns of Antoninus, whilst



Constantia Rumbold Ronimund Bissing



Ronimund Bissing Constantia Rumbold



—with niches and alcoves, colonnades and porticos; the columns were crowned with acanthus leaves and surmounted by a threefold architrave bearing a frieze of lion heads and a key-pattern moulding

in the air, to be embossed with gold at its own expense." This gives an idea of the richness of the temple at that time.

Jupiter-Baal was represented as a young beardless god, clad in an armour of scales,

holding a whip in one hand and a thunder-bolt and some ears of corn in the other. He is accompanied by two bulls and he stands in one of the lovely alcoves ornamented with columns and niches in the forecourt. This



Ronimund Bissing

Fluted pilasters, arched niches and a richly carved entablature in the Corinthian temple of Bacchus—which is smaller but more beautiful in detail and better preserved than the Temple of Jupiter

BAALBEK, CITY OF RUINED TEMPLES

representation of the deity, coupled with the pagan cult, passed into European worship and was not suppressed until the 4th century, when Constantine the Great built a basilica within the temple walls. Later Theodosius erected a second Christian church in the main court.

The temple of Bacchus, which stands a little below the temple of Jupiter, is far better preserved and the great door through which one enters is alive with carved bacchante, satyrs, lizards and birds. Below the lintel the figure of an eagle, occupying much the same position as the wings surmounting Egyptian doorways, supports the evidence that Baalbek was greatly influenced by Egypt. The interior is decorated with fluted columns and carvings of Bacchus and his followers.

The outer walls of the sanctuary enclosure are perhaps one of the most remarkable features of Baalbek, the stones with which they are constructed being of herculean dimensions. Three blocks in particular, known as the Trilithon, are probably the largest ever used in architecture. They are about 60 feet in length and were quarried just outside the town. A fourth block of equal size is still lying in the quarry perfectly cut but not separated from the ground.

Standing alone, outside the precincts of the Acropolis, the smallest temple dedicated to Venus belongs to a period of Roman architectural decadence. It was, moreover, later converted into an orthodox chapel and the interior presents a strange mixture of rich pagan flower friezes and austere Greek crosses.

In A.D. 634, after they had conquered Damascus, the Arabs entered Baalbek and used the Acropolis as a citadel. They walled up some of the entrances, constructed additional walls and used the recesses between the lovely carved niches as loopholes for defence. Baalbek was then still a rich city and a bone of contention between the various caliphs of Damascus and of Egypt. In 748 it suffered a sacking with much slaughter and during the two ensuing centuries changed hands with great rapidity, passing from the Seljuk Emir of Aleppo to Jenghiz Khan, and from him back to Damascus again until 1175 when it was occupied by Saladin.

It was strangely fated never to fall into the hands of the Crusaders although they raided

the Bekaa valley more than once. Earthquakes shook the sanctuary to its foundations and it was ravaged and sacked by the Mongols under Hulagu and Tamerlane, but it always survived complete destruction. The immensity of its structure was proof against any weapons of war devised in those early epochs.

Baalbek came under Ottoman dominion with the rest of Syria in the early 16th century, but was really ruled by the Metawilis, a very ancient tribe of Shiah Moslems inhabiting the Lebanon. Their rule, in turn, was broken by Jezzar Pasha, the rebel governor of Acre, who created a state of anarchy which was only ended thirty years after his death by the Egyptian occupation in 1832. In 1840 the Treaty of London secured Baalbek as an Ottoman city once more.

After the war of 1914, when France was given the Mandate of Syria, the French did much to study and reconstruct the temple area and in the last years it has proved a rich field of exploration for archaeologists.

The recent fighting there has left Baalbek untouched. For once the armed forces sweeping through the Lebanon have passed her by. But the sound of battle was within earshot of the ancient gods of Baal.





Hillmen of the Sudan

by K. J. NOBBS

Among the isolated Sudanese tribesmen who are only now beginning to respond to modern influences are the Nuba people described in this article. The author has lived for some years with them and has also had opportunities of observing their neighbours, one of whom, a Shilluk man, is the subject of our first picture. Opposite is one of those fantastic contortions of rocks common in Southern Kordofan

IN Southern Kordofan, in the Anglo-Egyptian Sudan, there is a series of irregular, widely scattered granite jebels or mountains which never fail to give surprise and relief to the European whose duties lie in the flat and arid north. The interest and pleasure evoked is twofold. In the first place these wild massifs, whether they are the imposing mountains of Daier, Heiban or Talodi, or the fantastic contortions of isolated weather-beaten rocks, sport a coat of green shrubbery when the northern plains and deserts are brown and threadbare. Again, the black, virile tribesmen present a marked and often pleasant contrast to the sophisticated inhabitants of the northern towns and the grim Arabs of the desert.

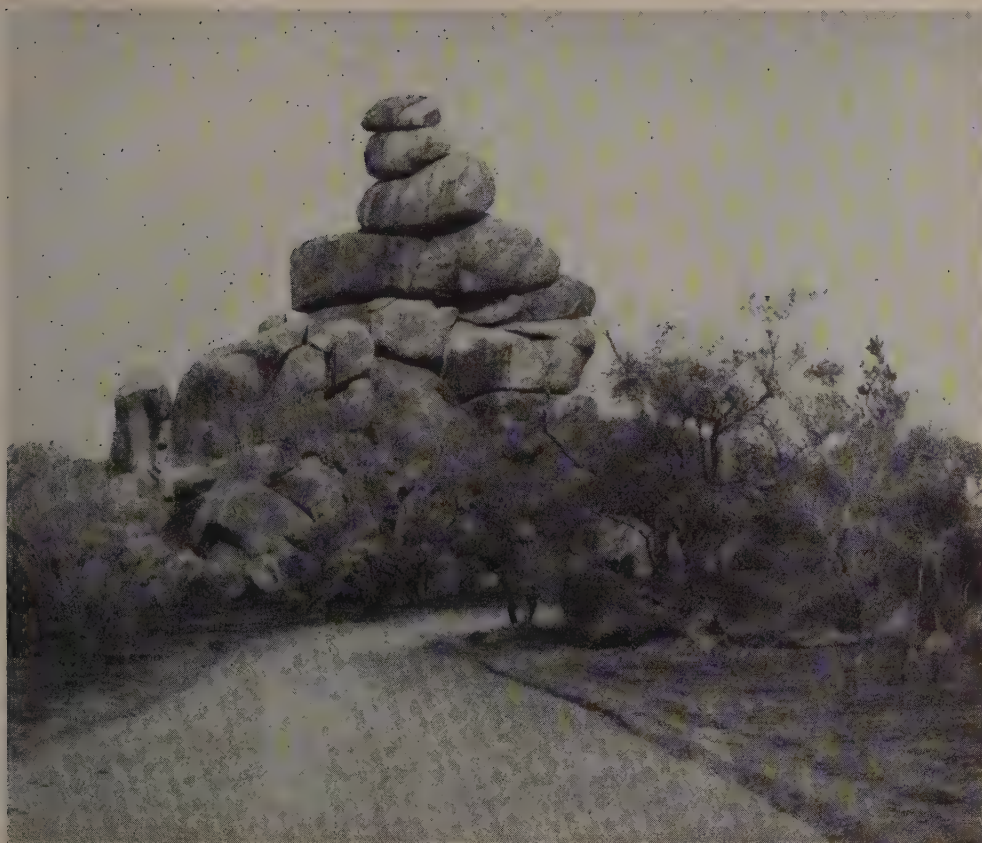
Both people and mountains take the name of Nuba, but they are not to be confused with the Nubia of the Nile valley. The name was originally intended for the northern tribes who are thought to have some connection

with the Nubians of the Nile, but for want of a better title all the Negro people in this particular area are now known as 'Nuba'.

There is, among the Nuba, considerable variety in physical type, wide and constant variation in language and equally perplexing changes in social custom. And yet, it is justifiable to think of this half-million people under one name. For topography and experience have given them a unity which is the more obvious against the background of Arab tribesmen around their hills.

The Nuba are in effect an enclave of the true Africa of the Black Man at its most north-easterly point. Exposed in the past to the ravages of the slave trade and migrating Arab bands, they have found in the heights and caves of their jebels adequate protection against invaders and against one another.

The area of the Nuba mountains can be comfortably enclosed between latitudes 10



All photographs by W. E. Redmayne

to 13° north and longitudes 28 and 32° east. From the Khartoum-El Obeid railway at its southern point, near Er Rahad, Jebel Daier, highest and most northerly mountain of all, stands out boldly in grand isolation. In the north-east, the area most exposed to outside influences, we find the only section of the Nuba who developed political cohesion. Owing to Mohammedan fakirs, the people of Tegale grew in local influence and the ruling *Mek*, or king, of today is a member of an unbroken dynasty which goes back many hundred years.

The isolation of each group of jebels from its neighbour is generally very marked. Great plains of black 'cotton soil' clay separate range from range. These great park-like lands of acacia shrub are interspersed with gravel or sandy strips where the baobab tree, elephant-like in its bulk, is a common sight. In the more favoured spots along the dry 'khors'

(water courses, dry, except for a short time after heavy rain) fair-sized trees and bamboo will thrive. Euphorbia shrubs of many varieties are common throughout the land. But the Nuba ignores this flat, cracked, cotton-soil country in his choice of a home, and prefers rocks and gravel-areas that provide a clean hard floor for village and hut, an elevated position, promise of water and freedom from mud.

South-east from Jebel Daier is found the central section of the Nuba who belong to one language-family; their language, though it has no common vocabulary with the Bantu languages of South Africa, yet operates in an identical manner. They are found from Kowalib in the north to Moro in the south, a distance of some 120 miles.

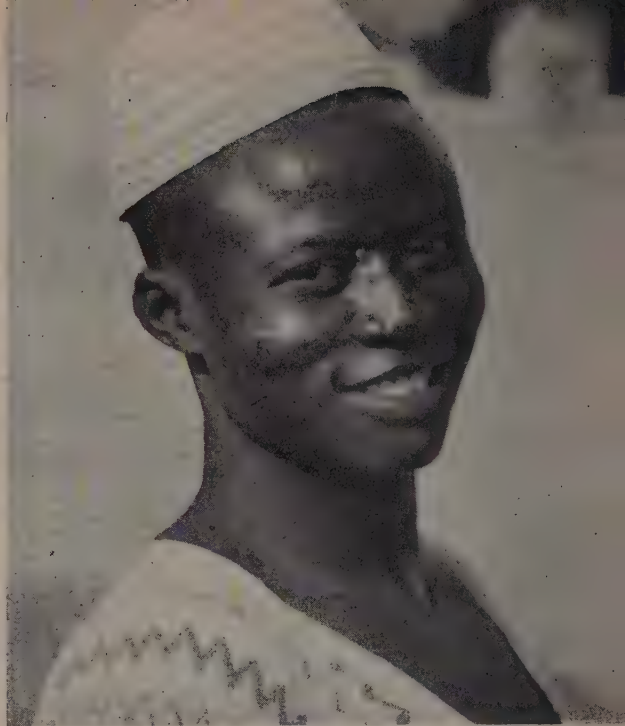
Further south again, as far as Talodi, Krongo and Mesakin, are Nuba of outstanding physique. Less ornate than the





(Left) A group of six huts forming a homestead in the Krongo hills of the Nuba mountains. Excellent craftsmanship is revealed in the building and thatching. Each hut is reserved for a specific purpose, such as cooking, sleeping, storage of grain and animals

(Right) Nuba women bring in head-loads of newly picked cotton, which is purchased, ginned and marketed by the Sudan Government. American 'rain crop' cotton is increasingly grown rather than the irrigated Egyptian cotton grown in the Gezira. Free seed is distributed to the people and small holdings are encouraged



(Left) *Nuba Madonna.* This maiden from the Kowalib hills is wearing the familiar thimble and pearl buttons with a careful blend of coloured beads, cowrie shells, brass wire and live beetles. Her hair is set with oil and soot. The baby is her sister. Nuba women nurse only a blood relation and foster mothers are unknown

(Above) *The smiling cook, Jalagong, gay but temperamental, hailing from Jebel Heiban*

northern Nuba in personal appearance, they are nevertheless fine craftsmen and build excellent huts, in a circle, suggestive of a medieval castle.

In the western Jebels area there is a great deal more economical development than in the east. Towns like Kadugli and Dilling, with cotton ginneries, hospitals and barracks, are fed from a hinterland in the Miri, Gulfan and Nyima hills. Hereabouts the same confusion of language exists, but Arabic in a corrupted 'pidgin' form is now the lingua-franca spread by peaceful times, travel and trade.

The seasons are well defined, with the rainy season falling between May and October. Change of season is the occasion for considerable migrations of birds and wild



(Above) Tribal marks cut in a woman's cheeks
(Right) A young Nuba prepared for grain threshing. The lime-wash is partly a mark of gaiety and festivity and partly a protection against the irritating dust from the chaff. While threshing is in progress, the young men live and sleep out of doors on the threshing floor, away from their villages as a rule

animals. The Nuba, who own large numbers of Remington and Enfield rifles from the days of Gordon and Hicks Pasha, have shot most of the gamé. For they are skilful in the doctoring of these old weapons, which are highly prized and in some tribes form an essential part of the 'bride-price'.

The staple crop of the Nuba is sorghum, a variety of millet (Arabic, *durra*). It is planted before or soon after the first rains in May. The plains are now more cultivated than in the troubled days of the past, and the laboriously terraced mountainsides are generally well covered with growing crops. Maize is planted near the homesteads and sesame, ground nuts, ocro (a vegetable with edible pods and seeds) and tobacco are also grown.





Going to bed in a Krongo Nuba hut demands skill and agility, and tumbling out in the morning is a delicate operation. This unorthodox entrance ensures immunity within from domestic animals

The Nuba, on the whole, do not enjoy a varied diet. In some tribes women and girls are forbidden the use of milk and eggs and may only eat meat killed by their own relatives. They have recourse to locusts, ants, caterpillars and sundry other foods not recognized as such by the Western gourmet. Children love field rats and rashly burn up the countryside in the dry season in order to hunt them.

There is a small area in the Kowalib where the tsetse-fly is found. The local cattle and pigs, however, are immune from

its bite and there is no 'sleeping sickness' among the Nuba.

Today numbers of Nuba are serving with the Sudan Defence Force and doubtless their keenness to serve is resulting in many more seeking to join the colours in the present campaign. They have a love of danger and sport. The Moro and Tira Nuba have seasons of stick fighting which often result in fatal casualties; and, among the Tira, women also fight with long switches. The Krongo Nuba in the extreme south are the supreme exponents of the art of wrestling and with the



Kowalib Nuba women show a strong liking for metal ornaments. The head pads are for purely utilitarian purposes, for these women have been carrying heavy head-loads

Mesakin they also practise spear-throwing at one another, which demands a steady nerve and a quick eye. The most deadly sport of all is practised at Kau and Nyaro, isolated jebels in the east, where men fight with iron bracelets. Initiation ceremonies usually involve rigorous tests, which include long-distance runs and severe beatings and are part of a triennial event among the Tira and Otor tribes.

The most distinctive head-dress is found among the Moro Nuba, who prepare for the stick-fighting season by first setting up their

hair in a series of mud sausages which are later given a coating of milk. The effect is striking, and so, of course, is the smell.

The Nuba mountains are becoming important as a cotton-growing district, but so far the Nuba people are growing very little. But they supply the labour for Arab planters. Cotton is perhaps a principal factor in the change that is to be noticed in the social life of the Nuba, who, with all Africa, are, economically and politically, 'on the march', though as yet they are in the rear ranks.

The Lost Colony

by DAVID SCOTT DANIELL

WHEN Sir Walter Raleigh organized his two colonizing expeditions to Virginia in 1585 and 1587 he was a generation or two ahead of his time. But then Raleigh, a true Elizabethan, touched with the magic of the Renaissance, had a mind beyond our understanding. He was, like many of his contemporaries, extremely complex, and it would be rash to claim that he was prompted by the same principle of colonization which has since brought into being the British Commonwealth of Nations.

Yet his conception of the use of land in the New World was startlingly new at the time, for he seems to have had ideals which closely resemble those of later generations of 'empire-builders'. The function allocated to the New World in his day was to fill treasure ships with the more tangible products and to send them home. The natives were used as slaves, or massacred and driven away if they resisted. But Raleigh's idea was to settle a company of English who would make their homes in the new world. They would develop the land, fraternize with the natives, trade with them, and thus establish a less spectacular but a more lasting source of profit for both the mother country and the new colony. In this Raleigh was certainly thinking ahead of his generation.

That both Raleigh's attempts at colonization failed was due to misfortune, insufficient experience in the business of establishing colonies, and a desire, natural enough at the period, for quicker results than were possible. But although both expeditions failed, and the second failure is shrouded in mystery, Raleigh's colonies were the first in British history, and for this he deserves more credit than he generally receives.

Raleigh's step-brother, Sir Humphrey Gilbert, actually preceded him by two years by landing a colony at the harbour of St John in Newfoundland in August of 1583. But lack of discipline and organization brought it to a speedy end, and Gilbert himself lost his life on the homeward voyage. This attempt at colonization had nothing of

permanence except the stone pillar Gilbert erected bearing the arms of England.

Raleigh's first expedition sailed in 1585. It consisted of seven ships under the command of Sir Richard Grenville, with a hundred and eight settlers, and they landed at Roanoke Island in 'Virginia', now North Carolina. Raleigh had sent out two ships to explore the coast of Virginia the year before, under Amadas and Barlow, and they had brought back glowing accounts of the country. They had also won the confidence of the natives in the immediate vicinity of Roanoke.

In Hakluyt you can read the report they sent to Sir Walter Raleigh. They found that the country adjoining Roanoke Island "had many goodly woodes full of Deere, Conies, Hares, and Fowle, even in the midst of Summer in incredible abundance". A native had gone off in a little boat, and desired to show his friendliness by catching some fish for them: "As soone as hee was two bow shoot into the water, he fell to fishing, and in lesse than halfe an houre, he had laden his boate as deepe as it could swimme. . . ." The soil was "the most plentifull, sweete, fruitfull and wholesome of all the world: there are about foureteene severall sweete smelling timber trees, and the most part of their underwoods are Bayes and such like: they have those Okes that we have, but farre greater and better".

There are pages of delightful description of this wonderful new land, which must have made good reading to a generation ready to believe any wonders of the New World. To this paradise came the hundred and eight settlers, and once landed, the command was given to Master Ralph Lane. Lane and Grenville quarrelled and Grenville sailed for home to fetch more supplies.

Things did not pan out as the colonists expected. There were more quarrels, there was a dangerous fight with unfriendly natives, and the colony was only saved from disaster by the brilliant generalship of Lane. But he was a better soldier, it would appear, than administrator, and the colonists had



Rischgitz Studios

Raleigh receiving Queen Elizabeth's command to sail on his first voyage of discovery to America in 1584—from the modern panel in St Stephen's Hall, Westminster, painted by A. K. Lawrence, A.R.A.

been badly picked. In a report after the voyage we read that

Of our company that returned, some for their misdemeanour and ill dealing in the country have bene there worthily punished, who by reason of their bad natures, have maliciously not only spoken ill of their Governours, but for their sakes slandered the country itself. . . . Some also were of nice bringing up, only in cities or townes, or such as never (as I may say) had seene the world before. Because there were not to be found any English cities, nor such faire houses, nor at their own wish any of their accustomed dainty food, nor any soft beds of downe or feathers, the country was to them miserable, and their reports thereof according.

In addition to the colonists who were, it appears, insubordinate, and to those who were not 'tough' enough to 'take it', there were others who "when that gold and silver was not so soone to be found, as it was by them looked for, had little or no care of any other thing but to pamper their bellies". There were also the 'lawyers', who "had little understanding, lesse discretion, and more tongue than was needfull or requisite".

It is easy to imagine that a company with such unfortunate members, if the report was not libellous, was doomed to failure.

When Grenville returned to Virginia from England in July 1585 with some more colonists and abundant supplies sent out by Sir Walter Raleigh, he found that his colony had begged a passage home three weeks before with Drake, who had called in with a fleet homeward bound. So Grenville left fifteen men behind him, to preserve the colony until he had reported to his master, and returned, saddened, to England.

But whatever his faults, Sir Walter Raleigh was persistent. Not daunted by the failure of his step-brother's attempts at colonization in Newfoundland, and by the sorry return of his first colony from Roanoke, he began to prepare for another one. This time John White was the leader, or 'Governor', and the company was now a hundred and fifty strong, with seventeen women and nine "boyes and children". John White had been to Roanoke with the first colony, and several of the twelve 'Assistants' had made that trip under Gren-



Rischgitz Studios

A 17th-century engraving of English colonists landing in Virginia

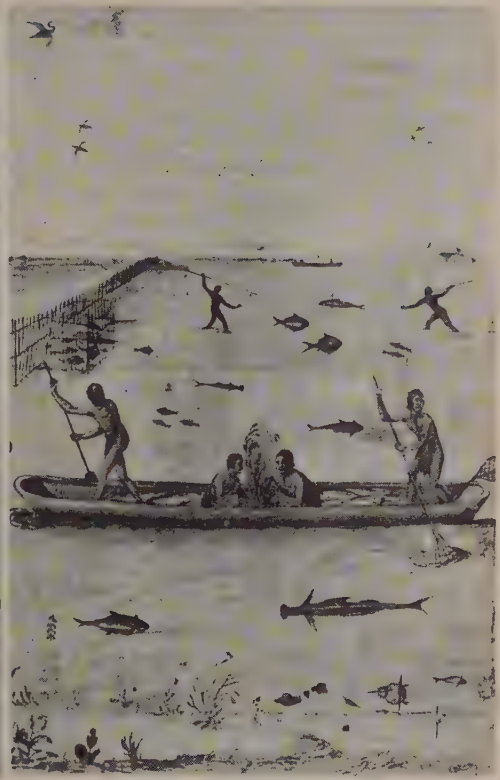
ville. John White was also a talented water-colour artist, and he brought back with him many pictures which have more than a historical interest.

When they landed on the island their first task was to find the fifteen men left the year before by Sir Richard Grenville. But after a long search they found only the bones of one of them. Then John White and

divers of his company walked to the North end of the Island, where Master Ralfe Lane had his forte, with sundry decent dwelling houses, made by his men about it the yeare before, where we hoped to find some signes, or certaine knowledge of our fifteen men. When we came thither, we found the fort rased downe, but all the houses standing unhurt, saving that the neather roomes of them, and also of the forte, were overgrown with Melons of divers sortes, and Deere within them, feeding on those Melons. . . .

This was certainly an inauspicious beginning to the new venture, and two days later George Howe, one of the twelve assistants, was killed by savages while he waded in the water, almost naked, catching crabs with a forked stick. George Howe had brought his son with him, one of the nine "boyes and children".

The settlers busied themselves rebuilding and repairing the fort and the houses, and building the traditional pioneers' palisade. The feelings of these first British Empire builders are difficult to recapture. They were planted down in this weird and wonderful New World, surrounded by all manner of dangers, known and unknown, and between them and their home and friends was a very long and very hazardous sea voyage. Fortunately John White was a careful adminis-



British Museum

Drawings by John White of (left) an Indian encampment and (right) Indians fishing

trator and a popular governor, and the dangers and forebodings of the less adventurous spirits must have been considerably assuaged by the wonder of the new climate and the abundance of fruits and wild life around them.

Among them was a native of the place, one Manteo, who had been taken to England by a previous expedition. He seems to have been a good fellow, and it is probable that the wonders he had seen in London, and the knowledge he had of the white men, gave him a fine feeling of superiority over his fellow natives. A party under Master Stafford went to the neighbouring island of Croatan soon after they had arrived, taking Manteo with them. The purpose of the visit was to find out what had happened to the fifteen men who had disappeared, and to discover the attitude of the natives to the colonists.

In the manner of conducting this interview we can see the policy of Raleigh, and recognize the general tone of British Imperial Policy of later centuries.

The natives showed an inclination to fight the white men when they landed, but when the English advanced resolutely towards them they fled. Then Manteo called to them, in their own language; they hesitated, and then became friendly. To quote Hakluyt again:

... some of them came unto us, embracing and entertaining us friendly, desiring us not to gather or spill any of their corne, for that they had but little. We answered them, that neither their corne, nor any other thing of theirs should be diminished by any of us, and that our comming was onely to renew the old love, that was betweene us and them at the first, and to live with them as bretheren and friends.

This led to feasting, and good relations were confirmed. Having made friends with their immediate neighbours, the colony proceeded to find out the temper and strength of other tribes in the vicinity, and to perfect their defences. Thus in rebuilding the fort and the houses, preparing land for cultivation and exploring the immediate neighbourhood, the first weeks passed busily enough.

On August 13 there was a pleasant ceremony, when the worthy Manteo was rewarded for his loyalty. He was christened, and at the same ceremony he was given the title of Lord of Roanoke and of Dasamonguepeuk. And five days later there was another happy event, when the first English child was born in the new Empire. She was named Virginia for that reason.

By the end of August the ships had unloaded their supplies and had taken on fresh water and repaired their rigging so that they were ready to return to England. The 'planters', as they called themselves, prepared letters "and tokens" to send home. Then an embarrassing dissension arose among the colonists. Two 'Assistants' were to go home to obtain fresh supplies and various necessary instruments and equipment, but none of them would go. One only was prepared to go home, but he changed his mind. It would seem that none of them trusted the others enough to leave his possessions behind, and that each feared that some discovery might be made of which he would miss his share. Whatever the reasons, no one wanted to go back to England.

So they all asked John White to go, but, to quote again, "he refused [it] and alleaged many sufficient causes, why he would not: the one was, that he could not suddenly retorne backe againe without his great discredite, leaving the action, and so many whom hee partly had procured through his perswasions, to leave their native country, and undertake that voyage. . . ." He also put forward the excuse that as they intended moving fifty miles into the mainland soon, his "stuffle and goods might be both spoiled and most of them pilfered away in the carriage". So even John White had doubts about his subjects in this new Eden.

However, they drew up a solemn testimony, signed and sealed by the principal settlers,

in which they assured Her Majesty's subjects of England that they had prevailed upon John White, their Governor, to return to England, and that he had agreed against his will, and that they promised to take care of his belongings. Thus they persuaded him, and he soon set sail for England, but only after some disastrous trouble with the capstan in weighing anchor, which injured many of the crew.

It was a gruelling voyage; sickness among the crew, a storm which blew them far out of their course, and shortage of drink so that "all the beverage we could make, with stinking water, dregs of beere and lees of wine which remained was but three gallons, and therefore now we expected nothing but famine to perish at sea". But they reached Ireland safely, and eventually England. Here John White reported to Sir Walter Raleigh and asked for supplies and equipment for his colony.

But it was a difficult time for organizing expeditions to Virginia, even to succour a hundred and fifty colonists. The Spanish invasion threatened, and although ships were sent off, they spent their voyages in privateering against the Spanish and thought more of the profits to be gained from Spanish treasure ships than of their deserted countrymen in Roanoke. The Spanish Armada occupied the attention of all English shipping in 1588, and the Government, in fear of a fresh invasion, placed a ban on outward-bound ships, which was still in force in 1590, three years after John White returned.

However, in February of 1590 John White prevailed upon Sir Walter Raleigh to obtain from the Queen an order of release for three ships which were lying in Plymouth. The order also permitted John White to take with him on the three ships a number of passengers, presumably new settlers, with the necessary supplies required at Roanoke. With this order the delighted John White repaired to Plymouth, but things went badly from the start. For

rather in contempt of the aforesaid order, I was by the Owner and Commander of the ships denied to have any passengers, or anything els transported in any of the ships, saving only my selfe and my chest, no not so much as a boy to attend upon me, although I made great sute, &

earnest intreatie as well to the chiefe Commanders as to the owner of the said ships. Which crosse and unkind dealing, although it very much discontented me, notwithstanding the scarcity of time was such, that I could have no opportunity to go unto Sir Walter Raleigh with complaint; for the ships being then all in readinesse to goe to the Sea, would have bene departed before I could have made my returne.

With these unsympathetic seamen John White sailed for Virginia, three years late, and throughout the long voyage he must have reflected apprehensively on the condition in which he would find his colonists. In his own words, the commanders of the fleet "regarded very smally the good of their countrymen in Virginia", and they delayed in the most exasperating manner on the voyage out, calling at other places on the way for raids and general privateering. Thus it was that the summer was spent before they arrived at Virginia, in spite of White's "daily and continuall petitions". But he had the philosophy of the seasoned traveller, "yet seeing it is not my first crossed voyage, I remained contented".

On August 17 they arrived off Roanoke, with a heavy sea running which made the landing in small boats difficult. They saw the light from a fire at the north of the island and anchored near by, and "sounded with a trumpet a Call, & afterwarde many familiar English tunes of songs, and called to them friendly, but we had no answer. . . ."

In the morning they landed, but no searching could find any of the hundred and fifty colonists. They found many ominous signs; many footprints of 'savages', the palisade broken and the fort and houses in ruins, broken cannon, and desolation everywhere. The search party scattered over the island, and some of the sailors found several chests that had been dug up from their hiding-places long ago and rifled. White's fears about his own possessions were proved to have been justified, for he found that "of the same chests three were my owne, and about the place many of my things spoyled and broken, and my bookes torne from the covers, the frames of some of my pictures and Mappes rotten and spoyled with rayne, and my armour almost eaten through with rust. . . ."

But they found something else as well, a



British Museum

Another drawing by White—of an Indian chief

clue to the disappearance of the colony. Before John White had left in 1587 he had arranged with the Assistants that if they left the island they should carve the name of their destination on the doors or trees, and if they were in distress they should cut a cross over the name. They found a tree with the letters CRO carved on it, and later they discovered that the principal post of the entrance to the palisade had the bark stripped from it five feet from the ground, and the word CROATAN carved on it, and with no cross, or signal of distress.

This signified that the colonists had moved

to Croatan, but here mystery comes into the story. If they went willingly and of their own free will, how came it that they left their chests and possessions behind? Or if they intended to fetch them again, why did they not do so? John White presumed, from the carved name on the gate-post, that his colony had departed to Croatan and that the rifled chests were the "deede of the Savages our enemies at Dasamonguepeuk, who had watched the departure of our men to Croatan; and as soone as they were departed, digged up every place where they suspected any thing to be buried; but although it much grieved me to see such spoyle of my goods, yet on the other side I greatly joyed that I had safely found a certaine token of their safe being at Croatan, which is the place where Manteo was borne, and the Savages of the Lland our friends".

He did not seem to question the deserted chests or the cannon all overgrown with weeds. They searched the island further, and then returned to their boats, for the sky was dangerously overcast and it looked as though a storm was brewing. They returned to their ships, where everyone was very anxious, fetched the sailors aboard who had been getting water from a little island, but before they could bring them the storm blew up and the casks were left behind. They feared for the anchor cables, and decided to put out to deeper and safer water. They had great trouble getting the anchors up and lost three, having to cut the cables. The plan was to make for Croatan, but the weather grew "fouler and fouler", and they changed their plans and decided to sail southwards to find somewhere to take on fresh water. Their companion ship, the *Moone-light*, went off directly for England, and the *Admirall*, the ship White was on, began a wayward voyage which took them nowhere near Croatan, and began to seek prizes and more profit than could be found in visiting the deserted colonists. They left Roanoke on August 19 and sailed homewards,

meeting Spanish and English ships time after time, and at the end of his account of the voyage John White makes this amazing comment—"On Saturday the 24 (of October) we came in safetie, God be thanked, to an anker at Plymouth".

There is no mention of the colony. White's ship sailed away from Roanoke intending to visit Croatan at once, changed their mind because of adverse weather, and then set off adventurously and in the most leisurely manner for home, hoping to pick up prizes as they went. On the face of it, it looks like blatant desertion of his colony on the part of John White. Yet his companions may have refused to put in at Croatan; if so, why does not White complain of this, or say that he urged them and that they refused?

And again, what had happened to the colonists? Had they gone to Croatan willingly and in no distress, as the sign on the gate-post implied? If so, why were the chests left, especially John White's, which they had sworn to care for? These are mysteries which will never be solved unless some unexpected evidence is discovered, which is unlikely enough. The suggestion that the settlers intermarried with the natives is no more than a legend. It says that the colonists went to the Croatans for help and settled with them. When the Croatans moved to new hunting-grounds, they took their new friends with them. This tribe still holds the belief in America today, and it is said that occasionally a child is born with fair hair and blue eyes and a white skin. One hopes that they did 'go native', for that is better than death at the hands of savages. But one also asks why they were deserted, and why Sir Walter Raleigh did not move heaven and earth, and even Queen Elizabeth, to send help to the colonists he himself had sent to Virginia. If anyone was sent to find out what had happened to the colony, we do not know of it, and the Lost Colony of Roanoke remains a mystery, and an extremely tantalizing one.

ERRATA

Owing to an unfortunate confusion of proofs, the following inaccuracies appeared in the article on Switzerland, published in our August number: the number of years since the Swiss Confederation was founded is, of course, 650. The illustration on page 184 shows not Kandersteg but Viège in the Valais. For 'Eidelweiss', in the caption on page 182, read 'Edelweiss'.

English Earth and English Buildings

I. Limestone

by H. J. MASSINGHAM

In our last number Professor E. G. R. Taylor, looking forward, showed the importance of geographical and social factors in planning for post-war Britain. In the present article, first of a series of three, Mr Massingham looks back, and out of his deep and intimate knowledge of the subject shows how geological and regional variations have affected the man-made face of England

ENGLAND is a country built up out of a great variety of rocks, and so of landscape and vegetation, and so of buildings both in structure and material. She possesses, likewise to her gain, a variety of peoples, each with an individual culture of its own, partly blended and partly distinct according to locality. Thus, the mark of her, from the people to the earth they stand on, is diversity within the small compass of an integer. After looking long into that much-creased, expressive countenance, we discover that its human experience has faithfully reflected that plurality within a unity ordained by the structural framework.

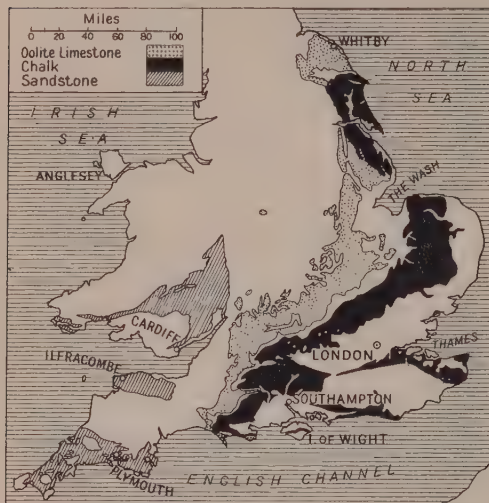
Up to a point, that is to say. This point is the Industrial Revolution. Henceforward, the facial characters are blurred, disfigured, stereotyped: sameness has replaced singularity, uniformity has been clapped upon multiplicity and the general has ousted the particular.

At first sight, it appears that the peoples of England have up to that date been entirely faithful to their respective geological differences simply as a matter of convenience and proximity. There is a great deal to be said for that view because it is one of common sense. Only under the artificial despotism of an economic system like the present has it become cheaper and more profitable for a region to erect its buildings from imported materials rather than out of its own native and natural bones. Why it should cost more to build a house out of the ground at hand than it does out of made-up substances conveyed over long distances may be explained by statistics, balance-sheets, mechanized pro-

cesses and the like. That does not conceal the fundamental irrationality of such a phenomenon.

Nevertheless, I do not think the whole issue is satisfactorily expounded by saying that regional architecture was the consequence of restricted communications and readiness of access. Were those communications so restricted as is commonly taken for granted? The Normans, for instance, imported Caen stone for church building and—an even more notable example—the Beaker Folk of the Early Bronze Age (1800 B.C.) imported the bluestones of Stonehenge from the Prescelly Mountains of Pembrokeshire.

It is plain that economic considerations were not the guiding principle. The noblest tithe-barn in England—that of Great Coxwell near Faringdon facing the massif of the Berkshire Downs—is built throughout of Cotswold limestone, though the Cotswolds are out of sight and the builders, the Cistercian monks, came from Beaulieu Abbey in the New Forest. The stone was doubtless carried, probably from the Stonesfield quarries, by means of the numerous waterways of the Upper Thames Basin. The same is to be said of Barnack and Ketton limestone (Northamptonshire), fetched by barge to build the churches of western Huntingdonshire, and the spirelets of the 'Herts Needle' churches, built on the chalk, whose stone was poled along Nene and Ouse. Patrington Church and its group in the coastal plain north of the Humber were built of the oolite limestone dug from the quarries of Lincolnshire, though the region is enclosed by an arc of chalk downs—the Yorkshire Wolds.



Stanford, London

There is, in fact, no disharmony between such buildings and their natural environment. The high-pitched roof of the Great Coxwell Barn, built of oolite slats according to the Cotswold technique, grandly translates into the medium of human construction the powerful sweeping downrush of the slope of White Horse Hill that faces it across the Vale. But turn to the Gothicizing experiments of the Victorian restorers. They imported the mannerism of the East Anglian 'flushwork' in flint and freestone into Devon and the broad spire of Northamptonshire into Kent. We perceive the incongruity in a moment. Something intrinsic to the nature of things has been violated; the deed has been done in the wrong way, in the wrong place and at the wrong time. Therefore, the regional fidelity of the pre-mechanical ages is something more than the common sense of convenience. Fitness to purpose, to landscape, to the structural basis of the region implies growth from within. Regional architecture, in being true to the bones of things, is in its wholeness like a work of art, making the most of the material but accepting its limitations. The way we have to look at the apparent exceptions to this law of inward being I have given is as a spilling-over, a marginal superabund-

ance due to the vitality of the creative spirit whose workshop is the region.

A PEERLESS STONE

Local characterization was so intense in all the stone-producing districts that there are as many variations of idiom between them as there are differences in the grasses of a meadow. Let me then begin at the periphery and work inwards to the centre, which is the oolite limestone, the papal crown, it might be called, of the whole hierarchy of building stones. Even in the province of roofing with stone slats (now a moribund industry), where there is little latitude for individual and experimental departure, we can distinguish varieties both of treatment and appearance between, say, Horsham, Purbeck, Colly Weston, Cotswold, Swaledale and 'Midland slab' (Forest of Charnwood) roofs.

Both the Colly Weston slats of Northamptonshire and those of the Purbecks in Dorset are limestone and so heavy that the pitch of the roofs has to be at an acute angle to support them. Yet the eye picks out in a moment as strong a differentiation between them as between the structure of a beech and a hornbeam. The linear effect of Purbeck roofing is severe, primitive, even dour, while the outlines of Colly Weston slats are softly modulated in their intricate waviness. Yet, lest we should be tempted to think of Purbeck rock as stubborn and austere (it is a late not an early limestone), we have the pier-clusters of Early English arcades and chancel arches, built of Purbeck 'marble' and a miracle of almost feminine delicacy. The Purbeck roof is in perfect harmony with the wild Purbeck scene.

Even in weathering, the regional modifications between one stone-roof and another offer as many contrasts to the observer as there are kinds of roof-stone. Oolite limestone bottles the sunlight, whether its own actual colouring be grey, as on the plateau of the northern Cotswolds, or yellowish, as is the Ham Hill stone of which Sherborne Abbey is built. It has a way of absorbing the solar rays so that under a blue sky the

Widcombe in the Moor. The lofty church tower built of archaic stone finely expresses the character of the archaic landscape. It gathers up all the landscape in view and this is true regionalism





All photographs by Val D.

(Above) *Purbeck roofs round the Mill Pond at Swanage, Dorset. Note the sinking of the mid-roof in the foreground from the heaviness of the slats. (Opposite) Broached needle spire, Yattenden, Berkshire. This is a more primitive type of broach spire than the perfected examples of Northamptonshire, Rutland and Lincolnshire. The shingling of the spire is a common idiom along the chalk of the South Downs*

texture of the stone appears irradiated like the petals of a flower in the evening glow.

No other building stone in England possesses its peculiar radiance in sun or its ghostliness in shadow, and it affords just the right contrast with the clear-cut angularity, especially at the gable-ends, of all limestone buildings, whether in or out of the Cotswolds.

These contrasts are even more apparent in other directions when one type of limestone is compared with another. Both the Mendips and the Pennines, the sharply articulated backbone of the North, with terraced flanks, gorge-like valleys, headlong 'scars' and tabu-

lar summits, are of carboniferous limestone, a Primary rock much older than the Secondary oolite. The local buildings from church to cottage decidedly reflect, as does the landscape itself, the antiquity of the rock on which they stand and of which they are constructed. The squat rectangular chimney-stack south of, and the beehive stack north of, the Tees express a rugged, primeval, Esau-like character in keeping with their native stone; this is accentuated where the harsh millstone grit caps the Peak region of the Pennines. The heavy rubble walls of the Peak and the grit-stone cottages of the Yorkshire Pennines, with their wide joints and massive blocks and





The limestone of these Pennine cottages (note squat chimneys) is much older than that of the oolite ridge of south-western, western and eastern England. The cottages rightly express this antiquity

low sturdy fronts, are far closer in structure and effect to the bare or white-washed granite buildings, the oldest igneous rock of all, of parts of Cornwall and Devon, of Eskdale in Westmorland and the St David's Head promontory of Pembrokeshire than they are to later limestones even in Yorkshire itself (the East Riding) where the influence of the much softer and, shall I say, more civilized oolite makes itself felt in the Lincolnshire and Northamptonshire types of the churches.

Wherever we travel, whether among the rough-hewn but stately towers of the Cornish and Dartmoor churches, or the little clumpy churches of the Yorkshire Moors, or between Ludlow and Wenlock Edge (Clun Forest, for instance) where the buildings are of the archaic Silurian limestones, or along the wide sweep of the granite Cheviot, or below the

green stone-slatted roofs of Lakeland, or where the streamlets of Wye and Severn emerge from the Palaeozoic rocks of Plynlimmon, we shall observe the same thing, namely, a wider difference in character between the stone buildings of the earlier and later limestones than between the former and those rocks of unfathomable ages of which wildest Dartmoor is the archetype.

The interiors of the churches may often excel, as in Cornwall and Devon, in the utmost refinement of woodwork (bench-ends and painted screens from wall to wall); the obdurate granite may be carved, as at Tiverton Church in Devon, with a luxuriance more like French Flamboyant than English Gothic; the proportions of church, manor or cottage be as perfectly balanced as you please. All sorts of social, artistic or economic factors, such as the prosperity of the



Yorkshire grit farmstead. Another example of an archaic limestone expressed in the sturdiness and durability of the buildings

wool areas in the 15th century or the greater ornamentalism of Decorated as compared with Early English church architecture, may appear to confuse and so to confound the issue. Nevertheless, this central principle holds firm. It is that building, landscape and rock all form a trinity in likeness of character, the primal element of the rock, be it granite, basalt, schist, volcanic, Cambrian or the older limestones, being preserved both in the scene and in the building. This triune elementalism is the feature of the more ancient regions.

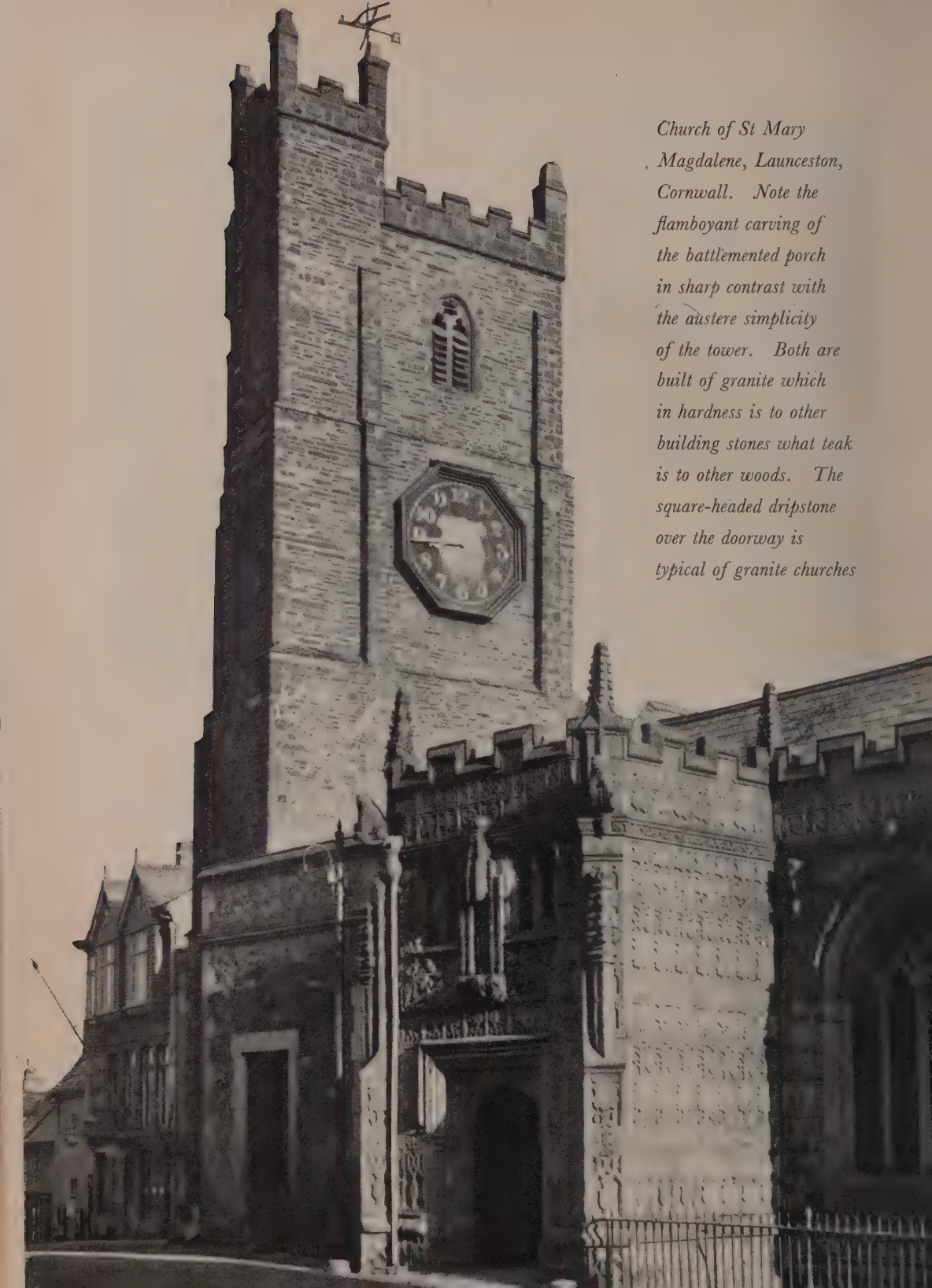
FOUR TYPES OF LIMESTONE CHURCH

Oolite limestone is, as I have said, flower-like in its reception of the light. It is also the flower of the limestones, not only for its weathering properties but for its tough resistance to the acids of time, combined with its

easy welcome to the chisel of which the greatest masons in our history—the medieval—took advantage.

Oolite limestone is a highly irregular belt of surface rock, spread out in the centre and tapering at each extremity (rather like the effigy of the Brontosaurus in the Kensington Museum) and extending north-eastwards from the coast of Dorset near Bridport, through eastern Somerset and north-west Wiltshire and so on through the Cotswolds (the bulky middle) to the North Riding of Yorkshire.

Taking in parts of ten counties, it begat four main types of church architecture. In the Cleveland Hills of the North Riding and spilling over into the Midland Plain from the western edge of the Cotswolds, arose the Cistercian religious houses of Early English Gothic of which Hailes, Tintern and Abbeydore in the west and Fountains, Bylands and

A black and white photograph of the Church of St Mary, Magdalene, in Launceston, Cornwall. The image features a tall, square stone tower with a battlemented top and a weather vane. A large octagonal clock face is mounted on the tower. Below the clock is a doorway with a square-headed dripstone. The church is built of granite, and the surrounding area includes a street and other buildings.

*Church of St Mary
Magdalene, Launceston,
Cornwall. Note the
flamboyant carving of
the battlemented porch
in sharp contrast with
the austere simplicity
of the tower. Both are
built of granite which
in hardness is to other
building stones what teak
is to other woods. The
square-headed dripstone
over the doorway is
typical of granite churches*



Fountains Abbey, founded by the Cistercians in 1132, a consummate example of limestone building in Yorkshire. Cistercian buildings along the limestone ridge are, outside the cathedral, the flower of Early English architecture. Ornamentation on them is spare

Rievaulx in the north are the most familiar examples. Their key is not so much their simplicity and reticence as their spirituality.

No architecture in the world can compare with the Cistercian in its power of rendering into terms of our limestone the purest aspiration of the human spirit towards God. Their Abbeys are the very music of stone—antiphonal plain-chant. Since the Cistercians were likewise the greatest farmers of the Middle Ages in land-reclamation, stock-breeding and sheep-rearing, their example richly illuminates both the particularity and integration of the regional idea.

The second form occurs principally in the Cotswolds—the elaborately carved parish churches (tympana, jambs, chancel arches, etc.) of the late Romanesque. The feeling of these little Norman churches is exuberantly pagan and earthy (Kilpeck is the best instance, though not in the Cotswolds), full of

complicated symbolism, extravagant in burlesque and grotesque, rather tortured but dynamic.

The third great efflorescence is revealed along the somewhat narrow serpentine tract of limestone from Olney to Grantham, taking in eastern Northamptonshire, Rutland and western Huntingdonshire, and terminating in the col or tongue of land called the Lincolnshire 'Cliff'. The highly ornate churches are nearly all of the 13th and 14th centuries and characterized by broach or parapeted spires gliding inwards from the towers by means of triangular pieces of masonry (the 'broach') or slender parapets often with flying buttresses in a lovely continuity. The magnificence of these churches in carved stonework is astounding, and desperately forlorn looks their tragic beauty in the midst of the squalor, the ferocious ugliness of modern industrialism.



Romanesque village of Frampton Mansell, Gloucestershire. Norman building is common on the Cotswolds and the tympana of the church doorways are often richly carved with symbolic and figurative meanings. But the tower here is unique in structure



Small manor houses are usually much more characteristic of regional building than large. Imported stone and imported fashions were frequent on the latter, so that they do not fit into the landscape as do the less ambitious manors, such as this one at Sevington, Hampshire

The fourth manifestation are the great Perpendicular towers of Somerset—Batcombe, Evercreech, Bruton, Huish Episcopi and the rest—which are unique, as are the Norman porches of the wolds, the spires of the Nene Valley with their gabled lights and the peerless east windows of the Cistercian Abbeys. Majesty is the word for these strong but exquisite, monumental but soaring towers, gazing over miles of undulating orchard and pasture with an aerial grandeur that is kingly indeed. The dignity of their linear proportions is in no way impaired by their wealth of stone trappings in open parapets, canopied niches, crocketed pinnacles and the like. Simplicity of line is at one with profusion of decoration, gianthood with grace. They are the 'mighty line' of a regional genius, all of one family and yet each one different and original in its own right.

If we take these four main groups of local proliferation from the oolite limestone and subdivide again into such twig-like variations as the wayfarers' crosses of the Cleveland Hills, the saddle-back mannerism of the limestone church-cluster in north-western Wiltshire, the peculiar bell-cotes of the Cotswold plateau, the stumpy broach-spires of the South Cotswolds (Bisley, for instance) and the full-bodied towers of tawny ironstone (oolite with carbonate of iron) in northern Oxon, something is gathered of the exceeding richness and variety of the inspiration that came from one type of limestone in one sphere only of creative energy.

GARDENS OF STONE

But I never took in the full measure of fertility in blossoming from the old intercourse between the craftsman and his garden of stone until I travelled the oolite belt from end to end—and remember that I only saw the skeleton of what had been once upon a time.

In secular building, the oolite country teems with beauty, invention and poetic paraphrases of one dominant idiom. The Tudor and later manors reveal no radical break with the Gothic tradition of limestone architecture. For three centuries after the Dissolution it was maintained in the switch-over from religious to lay building. The mural painter of sacred scenes and person-

ages merely transferred his attention after the middle of the 16th century to pagan cornucopias on the plaster ceiling of the new Tudor mansion. Semi-classical intrusion from without was speedily absorbed into the more native Gothic inheritance, so that the surviving architecture of this entire limestone region may virtually be considered as dateless between 1200 and 1800.

Graduated changes, minor modifications, discardings and additions there certainly were—the sash window replacing the mullioned frame and casement, for instance,—but the likenesses between sacred and secular, pre- and post-classical building so far outweigh the differences that it is possible to view the whole range of buildings as a single complex.

THE SMALL MANOR

This neglected fact can be more clearly realized in the smaller rather than the greater manors like Deene Hall, Kirkby Hall, Lilford Hall in Northamptonshire and Barington Court, Wynford Eagle, Mapperton in Dorset, edifices rather than buildings (even Montacute House is so), more coldly uniform and standardized to an external fashion than is the vernacular style of the less grandiose country house.

Great Chalfield Manor in the Wilts-Somerset borderland is a perfect example of what I mean. It is a compact grouping of chapel, manor, barns, mill, bartons and courtyards surrounded by a moat and a ha-ha hedge and built by Thomas Tropenell in 1490. The composition as a whole with its bewitching details of oriel windows, crocketed spire, finials and gable-ends has the enchantment of a fairy story. To stand before this dream-cluster, this Gothic fantasia in symbols of stone, is to remember Chaucer's magic line about Wessex—"All was this land fulfilled of fayerie". But for unobtrusive Renaissance extras, the smaller manors of the south-western limestone—Purse Caundle, Yatton Keynell and Sandford Orcas, for example—carry forward into a new age the Gothic tradition of Great Chalfield.

THE VILLAGE PATTERN

The villages, where they are more or less inviolate from modernism, possess this same quality of agelessness, as though time were



The Old George Inn, Norton St Philip, Somerset, ecclesiastical in character, has two-lights lancet windows and the figure of a carved angel within the pointed arch of the doorway

disarmed within the spell of their immemorial quietude, as though in sleep they awaited the wand of renewal. To come for the first time, and omitting the whole of the Cotswolds from the reckoning, upon Barrowden and Cottesmore in Rutland; Lowick, Duddington and Aldwinkle St Peter in Northamptonshire; Castle Combe, Biddestone and Lacock in Wiltshire; Wellow and Norton St Philip in Somerset; Stoke Abbott in Dorset is to step out of the present into a past embalmed.

I might say almost the same about such market-towns as Stamford, Bruton, Sherborne and Bradford-on-Avon. A Land of Goshen, indeed, and behind those cottage fronts fulfilling Sir Henry Wootton's criterion of "commodity, firmness and delight", beyond such revelations of translunary beauty as the Eleanor Cross at Geddington in Northamptonshire, of craftsmanly elegance like the

cottage of Haunt Hill House at Great Weldon, of perfection in beauty and use like the great medieval bridges of Irthlingborough and Bradford, it is possible to build up the fleeting vision of an intensely localized and multiple life, a ferment of interlocked craftsmanship, as though the holy spring of creation had been struck from the stone. A stone of Genesis since from it sprang a commonwealth of arts and crafts, a regional culture of whose fruitfulness the world of today has no conception. A hundred trades, of which wool was the chief, demonstrated that industry and beauty were once the interwoven strands of a single though composite fabric.

To this pattern the Cotswold area is the clue. We should therefore expect to find that the villages to the north and south of them introduced certain variants upon the



Lower part of the village of Castle Combe, Wiltshire, which winds in captivating fashion from top to bottom of the steep slope. Note the 'valleying' of the cottage roofs

dominant Cotswold style. This is so. South of Bath, the full stop of the Cotswolds, there are fewer gables than in the north. Cottage gardens are richer and rarely absent, while the Dorset reed-thatch, making beetle brows over the dormers, replaces the stone slats of the northern area.

None of the North Midland limestone villages is smothered in creepers and roses, clematis and jasmine like the embowered homes of the Dorset labourers. The street of a Midland limestone village is often an open brook of grey stone, long-drawn-out and with few tributaries.

The Dorset, Wilts and Somerset villages meander in their courses, vary their yellowish stone with more lavish use of half-timbering and are "half hidden from the eye" in

greenery. At Lacock, plaster, old red brick and timber framing share the village with the limestone, a sight very rare in its northerly extension. Here the roofs are more steeply pitched than in the south and ornament is sparser than in the Cotswolds. The aspects are altogether more linear, and shape, angle and structure are the compensation for the rich confusion of natural growth with stone design in the regions nearer the southern sea. Many a tangled roof-landscape is to be seen among the "dumpling hills" of Northamptonshire and the little wolds of Rutland.

Rural felicity for the south; a prodigal variety of line for the country of John Clare; the source of creation — the limestone — presiding over all.

Back to Abyssinia

The Emperor's Tasks.

by CHRISTINE SANDFORD

"The Emperor Haile Selassie, with the help of a Cabinet, has begun the reconstruction of his country: the first country to be free from the aggressor's yoke"—said the Lord Privy Seal recently in the House of Commons. Mrs Sandford, whose home for many years has been in Abyssinia where her husband is now political and military adviser to the Emperor, dots the i's and crosses the t's of that Ministerial statement

THE geography of Ethiopia has made its history. In its inaccessible hills and valleys the Ethiopian people have lived their own life apart, and their long history of independence and isolation has moulded and formed their character. The country consists of a great central plateau varying in height from six to twelve thousand feet, cleft in every direction by the mighty chasms through which run the tributaries of the three great river systems: those of the Blue Nile, to the north-west, the Hawash to the north-east and the Omo to the south. All these rivers rise within a few miles of each other: only one, the Blue Nile, reaches the sea. The ravines which they cleave through the uplands form, in chief part, the obstacle to easy communications which has made the history of Ethiopia.

It will give some idea of the depth of these chasms, if I explain that my husband and I held two properties, one on the plateau, the other in the Muger valley, one of the tributaries of the Blue Nile. Our two houses, not

an hour's walk apart, were at altitudes that differed by 2000 feet, and the river was another 600 feet below. Climate and vegetation were entirely different: our yearly change of air was to go down to the lower farm when the planting of the coffee was due, where bananas, oranges and pawpaws came as a pleasant variety after the strawberries, plums and quinces that grew above.

Variety is indeed one of the features of Ethiopia—in climate, scenery, peoples and languages. Thirty-seven different tongues are spoken among the peoples of the Empire; and there are almost as many facial types.

The name of 'Abyssinian' is probably derived from the Arabic word *habeshi* which means a 'medley', and though the inhabitants themselves prefer the older name of 'Ethiopia' the foreign description is apt.

There are four main divisions, however, under which the many diverse peoples may be classed.

In the north live the Amharas, the ruling race, whose language, Amharic, is that of the Emperor and his court. The Amharic people inhabit the provinces of Amhara, Tigre, Gojjam and Shoa.

The Galla peasants, immigrants from the south, have settled down as cultivators, in the country south and west of the capital, and have even driven a wedge up between the plateau and the Danakil desert.

In the great desert fringe which stretches for miles east and south-east of the plateau wander the nomad tribes of the fierce Danakil and the warlike Somali.

In the hot valleys and forest country that border the Sudan frontier with Ethiopia, live the negroid and Nilotic tribes who have from time immemorial been the prey of the slave



Stanford, London



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 1889

Signed portrait, taken in the first year of the Emperor's reign and presented by him to the author

raider and dealer. These are small tribes, pagans, without any political unity or confederacy among themselves: they are far from the central authority, and for this reason have suffered most from the maladministration of the outlying parts of the Empire, which was an almost inevitable result of poor means of communication.

That the Emperor Haile Selassie was fully alive to these evils and anxious to put an end to them was evident from the changes made in the first five years of his reign. Five 'model' provinces were reconstituted under enlightened governors, and in the most notoriously ill-governed province of Maji an English adviser to the new governor was appointed by the Emperor, with special instructions to investigate and suppress the traffic in slaves. In six months remarkable results were obtained.

This is to anticipate, however, and to appreciate fully the task to which the Emperor Haile Selassie has devoted his life and energies we must look back to the days of Menelik, the founder of modern Ethiopia.

It was in 1889 when King John, Theodore's successor, fell in battle with the dervishes at Metemma, that Menelik, King of Shoa, found himself without a serious rival for the proud position of King of Kings of Ethiopia and Conquering Lion of the Tribe of Judah. This title points to the semitic origins of these African people, whose proud claim it is that their royal line is in direct descent from the union of the Queen of Sheba with King Solomon. Thus originated their civilization, largely Jewish in outlook and custom, their language—and even the physical features of the Amhara. Converted to Christianity by the visit of Frumentius in the 4th century,



Muriel Curry

Inaccessible hills and valleys which intersect the plateau country. Roads, constructed by the Italians during their occupation, climb up and down and sometimes through these. Gradients are excellent though surfaces are often bad



E. N. A.



Keystone

Outskirts of Addis Ababa seen against the Entotto range. When fuel was unobtainable in his new capital the Emperor Menelik imported eucalyptus (blue gum) seed from Australia and ordered its planting round every house. The city is now hidden in a forest of these trees

as the result of a chance shipwreck some years earlier, the Ethiopians have clung tenaciously to their faith, conscious of their isolated position in the sea of Islam all around, but with the vision always before their eyes of the ideal unity of their country under a divinely appointed dynasty.

It was this ideal that the Emperor Menelik set himself to transform into a reality, and by the time of his death in 1913 he had largely achieved his aim. The highlanders of the central plateau were welded together by his firm hand; the Gallas of the south were conquered by his able generalship. The outlying fringe of desert peoples, Danakil and Somali, had been forced into nominal submission. Most important of all, the Ethiopian Empire, whose boundaries Menelik himself had determined, was set upon the map of Africa and recognized by Europe.

This was the position in 1913. After a period of acute danger at Menelik's death, and during the three years which saw the accession, the threatened apostasy, and the deposition of Lij Yasu, Menelik's unworthy

successor, the great general was succeeded by an able statesman who was to guide the newly constructed Empire along the difficult and stony path of progress, and make first contact with western civilization.

Haile Selassie's task was from the very first extraordinarily difficult. He was not even possessed of supreme power in his own country. The deposition of Lij Yasu in 1916 had been in favour of a daughter of Menelik, who was crowned as the Empress Zauditu, so that Ras Tafari Makonnen, as Haile Selassie was then called, was only Regent.

Round the Empress gathered all the forces of reaction. The Regent was bitterly aware that he must work against time, in the sense that any prolonged delay in restoring order and making progress would provide an excuse for interference by one or all of the three Great Powers, England, France and Italy, whose territories surrounded him. Yet he could not hurry the pace, not only because of the recent fatal example of King Amanullah of Afghanistan, but also because it was not humanly possible to do so. The



Paul Popper

The centre of Addis Ababa before the Italian invasion (above). In the distance is the round hill of Monogasha where, legend says, the ancient kings of Shoa were crowned. European needlecraft is taught in the Empress Manen's school for girls and seems to be popular. These pupils (opposite) will have learned to spin their knitting wool at home

Regent early decided that he must bide his time, and meanwhile do everything possible to keep the Great Powers quiet, and maintain the independence of his country while preparing his plans for the future when full power should be his.

A master stroke—or so it seemed at the time—for ensuring the independence of his country was to effect the entry of Ethiopia into the League of Nations in 1924. He backed this up in 1928 with an even more striking success by concluding a treaty of amity and arbitration with the only potential aggressor, Italy. Both these achievements were brought about while he was still Regent,

with his hands tied as far as internal reform was concerned.

For fourteen years Haile Selassie kept his end up against what often seemed overwhelming odds. Yet he was far from inactive. The training and education of the future Civil Service, which was one of his closest interests; the planning of better means of communication between the centre of government in Addis Ababa and the provinces; legislation against slave raiding and trading which was to implement his country's pledge to the League—all these were indications of the way in which his mind was working.

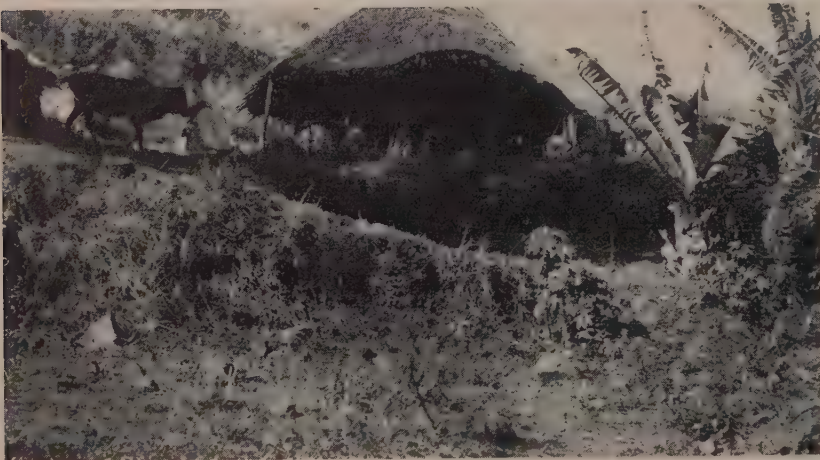




Stages in the construction of a hut. (Top) The framework of the wall has been erected, the uprights being sunk about $1\frac{1}{2}$ feet deep in a ring in the ground and bound together at intervals by strong withies. The framework of the roof, probably of bamboo, is also ready



(Middle) The assembling of the two parts, accompanied by much heaving and shouting. The next stage will be the thatching of the roof with coarse grass and finally the 'mudding' of the wall. The mud is prepared in a pit close by, and then handfuls of it are thrown at the wall from without. Some mud will go through the interstices of the uprights, and when the process is repeated from within a firm wall of interlocking mud is formed which will be smoothed off later and give a hard surface. The finished product (bottom), with its garden and mock banana trees, the stem of which is used to make a kind of bread in some districts



Amy Drucker

In 1930, with the assumption of supreme authority as Haile Selassie I, the Emperor's task was simplified, and in the five years that elapsed between his accession and the Italian act of aggression much was accomplished, though the cloud of war began to grow larger.

By 1933 the necessity to meet this had overshadowed all else. The appointment of foreign advisers to the chief ministries which had all been reformed and rehoused; the invitation to a Belgian military mission to reorganize the army and train the royal bodyguard; the visit of the Anti-Slavery Society's commission and the re-establishment of the Slavery department and provincial bureaux; the provision of a Constitution "for the political education of my people"; reform in all national activities: these were the daily and hourly preoccupation of this most tireless of Africans. Indeed, only those who knew the Emperor intimately could have any idea of the immense amount of hard work he did, and of the force of his personal example.

Then the storm broke about his head. The Emperor's first and last line of defence was the League of Nations—and it failed him. That his confidence was misplaced was not so much an error of judgment on his part as a reproach to western civilization. Yet this African monarch, defeated by the science and barbarity of European warfare, had still the moral courage to pursue his own policy to the end, to spare his own people the useless sufferings of a hopeless campaign, and to carry his own case to the judgment bar in the face of Italian catcalls and European hypocrisy.

Even then defeat did not embitter him. In his retirement and exile in this country his mind was fixed on the future and its possibilities: on the opportunities to be snatched when the occasion came, and he might go back to his people with that help which he had pledged himself to obtain before he should return.

Now he is back, back to long days of work after years of enforced inactivity; back to a country which has changed and is yet the same; back to a reconsideration, in new aspects, of those problems of reform, educational, administrative, social and economic,

which are still there in spite of, indeed because of, five years of Fascist rule: problems which have in many ways been complicated by the violent imposition of an alien will upon a free people.

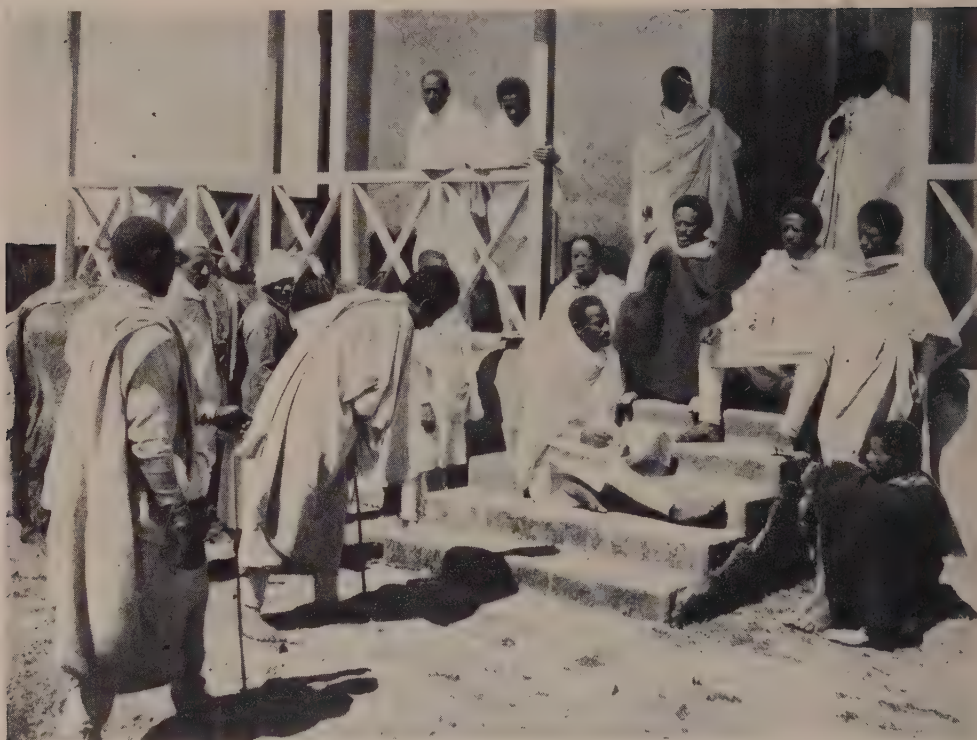
These Ethiopian people, first victims of Fascist aggression, are now first to be reinstated in their traditional freedom. How do they live? What are their interests and pursuits? What response can they give to the Emperor's schemes for their well-being and reform? To give a picture of them I cannot do better than describe the villages of the Galla countryside in which I lived for more than fifteen years.

It is typical of almost all the plateau country, for the population of Ethiopia is almost entirely agricultural except in the few large towns of Addis Ababa, Harrar and Dire Daoua. Even the soldiers who formed the feudal armies of the great chiefs, and of the Emperor himself, were interested in the land—whether they farmed it by their own labour or that of their *gabars*, or serfs. The *nagadies*, or traders, who plied between the outlying districts and the capital, bringing in the produce of the country with their long caravans of loaded mules and donkeys, were countrymen always anxious to get back to their homesteads for the rainy season, the ploughing and sowing season.

All the export trade was in the hands of foreigners: Arabs, Indians and Europeans.

Each village contains from six to twenty huts, round structures of wattle and daub with thatched roofs overhanging the mud walls. There are no windows, no chimneys, only a low door of roughly hewn wood. The floor is of beaten mud with a hollow in the centre for the smouldering fire that cooks the people's food by day and lights them by night. Sometimes an extra outside wall is added to give a circular passage round the outside of the hut; this will be full of household gear and implements, and perhaps a favourite pony will be tied up there for the night. The calves will come inside the hut for warmth and protection, as will also the cocks and hens.

There is no attempt at sanitation, and efforts at cleanliness are spasmodic, though the rivers and streams present a great array of washing before each great festival of



Keystone

Wayside court of law. The judge, with his feet apart, sits with the jury beside him. Below stand plaintiff and defendant. All wear the 'shamma' that, like a Scottish plaid, is thrown over one shoulder but may be worn in many ways each with special significance

the church. I was once assured that the shortage of milk one Easter Sunday morning was due to the shock suffered by the cows at seeing the milkmaids in their clean dresses!

The men plough, sow, reap and thresh. Every peasant owns his one or two yoke of oxen, and his mixed herd of cows and sheep. The women and girls draw the water, gather the fuel, cook the very simple and monotonous food, and, if there is need, occasionally help to weed the fields, and reap and carry the crops. The children do duty as herdsmen, and scare off the birds and monkeys when the crops ripen.

The Ethiopian grows what he needs to eat, and cotton for his clothes; he builds his house of materials that lie ready to

his hand. His needs are few: luxuries are scarcely known. The life of the Amhara differs little from that of the Galla. The rich man may own a bigger house, more cattle, wider lands, but in essentials his life is the same; there is little difference between nobles and gentry, gentry and peasantry; it is equally possible for any man possessed of intelligence and energy to rise to the most important positions in the land. Few people can read or write, though the desire for education is increasing under the stimulus of the Emperor's interest. Disease is rife, and rules of hygiene are unknown. The weekly visit to the local market, where commodities and gossip are exchanged, is the only relaxation unless one includes the love of litigation which



Amy Drucker

In the old days it was customary in Abyssinia for the great chiefs to travel with as many retainers as they could muster, for their rank and importance were popularly measured thereby. The Emperor (under the umbrella to the left) with his retinue at a religious festival

is almost a national pastime. Any passer-by may be stopped to serve as judge, the ring of bystanders constituting the jury, though there are of course proper courts and a judicial code for cases of greater importance.

Such a standard of living is, however, very low for a people—and a Christian people—who are proud of their early contacts with Jewish and Egyptian civilization. Two of the tasks awaiting the Emperor are the development of the natural resources of the country in such measure as will give to his own people a larger and wider share in the wealth of their land, and secondly, the

education of his subjects to the proper enjoyment and the responsibilities of such wealth.

To this end our help is pledged. If we can liberate this African people not only from the bondage of their enemies, but also from the enslavement of their own ignorance and isolation, setting them on the path of democratic freedom under their own enlightened leader, then we shall be going far to clear away the stigma on western civilization that was incurred when we followed a policy of appeasement at the expense of our responsibilities in Africa.

Scientific Problems in Colonial Development

by E. B. WORTHINGTON

Dr Worthington, author of Science in Africa, issued in association with Lord Hailey's great work An African Survey, is now Director of the Freshwater Biological Association of the British Empire. As a scientist, he has conducted Fishery Surveys in the lakes of Africa and actively assisted Lord Hailey in making his Survey, accompanying him on an extensive tour of the British and French colonies of West Africa and returning across the Sahara Desert

MORE than half of our Colonial Empire is in Africa, so the problems that I am going to discuss here apply chiefly to that continent. Readers with experience of the tropics will appreciate, however, that many problems are common not only to Africa, but also to other colonies of the far East and far West, where the longer period of relations with Europe has caused greater changes in the life of the original inhabitants.

Today the immediate problems of the war tend to efface the possibilities of development and social progress, which in the colonies seemed so promising in 1939. In that year, it will be remembered, Parliament voted five million pounds a year for development and a further half million a year for research in the colonies. The spending of these great sums had, of course, to be postponed. But now Italy is going off the map as far as the tropical territories are concerned, and other areas, especially the Belgian Congo and French Equatorial Africa, have dissociated themselves entirely from the Nazis who dominate their home lands. Therefore the African territories south of the Sahara, as well as colonies in other parts of the world, while helping whole-heartedly with the war, can perhaps look to the immediate future as a time of progress. The process of civilization need not come to a halt in them as it has perforce to do in a large part of Europe.

HOW COOPERATION CAN HELP

In presenting the scientific problems with which these territories are faced, one could make a list divided into categories: medicine, agriculture, forestry, entomology, geology, and so on. Such a list would be long and imposing but I do not think it would be very

helpful, because many of the problems cannot easily be classified: they lie so often just at the points of impact between three or four subjects, and have little hope of solution unless experts in a variety of fields are able to put their heads together and produce common ideas. To explain this, think of one big problem, that of food and nutrition, which is at the root of many troubles besetting colonial peoples today.

When food is made more plentiful and more varied, not only do the specific deficiency diseases like scurvy, pellagra, beri-beri and tropical ulcer disappear, but resistance is increased to other bodily and even mental ailments. Better food-supplies involve work by agriculturalists in devising and introducing better systems of growing crops, and by entomologists and mycologists in reducing pests; they involve also the development of fisheries and of forest products, and many activities of the veterinarian and the doctor.

Progress in many branches of development is being made all the time by small degrees, sometimes by large degrees, in individual colonies; but unfortunately the colonies are mostly far away from each other, and even in one colony the individual department or worker tends to get isolated. Consequently the same conclusions may be reached independently in several places after a deal of labour. This wastage of overlapping effort is one of the key problems of science in the colonies. Its solution can come only from closer cooperation: between individual departments in each colony; between the separate colonies and the corresponding authorities in each; between the British and foreign territories, and, above all, between those who plan improvements and the mass



E. H. Nightingale

African boys separating cotton seed in a home-made 'gin'. In big cotton growing areas such as Uganda and the Sudan this process is now largely carried out in factories using up-to-date machinery

of the population who are to benefit from them. We have much to learn from the Belgians, French, Dutch and Portuguese just as they have much to learn from us, but at present it seems to be an inevitable accompaniment of the colonial system that many things must be done many times over in many parts of the tropics.

LOSSES AND GAINS

Colonial problems in the four continents outside Europe have their origin in change. Before the arrival of Europeans the original human inhabitants had settled down to a state of life suited to their environment, employing methods often surprisingly well adapted to local conditions. Sometimes their way of life involved intertribal warfare—a ready means of removing the surplus population of human beings and of livestock; but even these and other activities which appear to us the opposite of 'civilized' were closely adapted to an environment limited by natural factors.

Much has now been altered, and in the process of improvement a great deal that was good in the original life has been lost. The old problems have been replaced by new ones. To appreciate them let us analyse some of the changes which are taking place today, noticing how the sciences may help to give solutions.

SURFACE CHANGES AND MAPS

First of all the surface configuration of the land and of the underlying rocks are continually undergoing slow changes, such as erosion which carves out valleys, and the building of volcanic mountains. Such changes undoubtedly had a great effect on the evolution of early man, but can be disregarded for our present purpose except in so far as the acceleration of erosive processes can, in certain conditions, lead to the direct loss of soil. Measurement of surface configuration leads to the production of maps, of which many more are still required, and on maps depend many of the developments of civiliza-



E. H. Nightingale

The old method of threshing; children separating grain from husks

tion, for example roads and railways, which are causing the most drastic changes to the environment.

WATER, A VITAL FACTOR

The combination of surface configuration, underground structure of rocks and the atmosphere above, give us water-supply, which, of all environmental factors, is the most important as controlling plant and animal life. Generally the character of vegetation and of crops which can be raised are determined not by the total rainfall so much as by its distribution through the year. Thus the double maxima of rain near the equator, caused by the sun passing overhead twice during the year, involves a double climate in vegetable growth and hence in agriculture. Even within the confines of one colony, for example Nigeria or the Gold Coast, food production has for this reason a double season in the southern territories

compared with a single season in the lands bordering the Sahara desert to the north.

Changes of climate must have effects of far-reaching importance. Therefore it is well to remember that many experts argue, from the alleged southward movement of the Saharan sands and the movement of population which has accompanied it, that parts of the tropics are only now emerging from the pluvial epoch which took the place of the ice age further north. If this be true, the problem of water-supplies, especially during the dry seasons, may get more acute in the future.

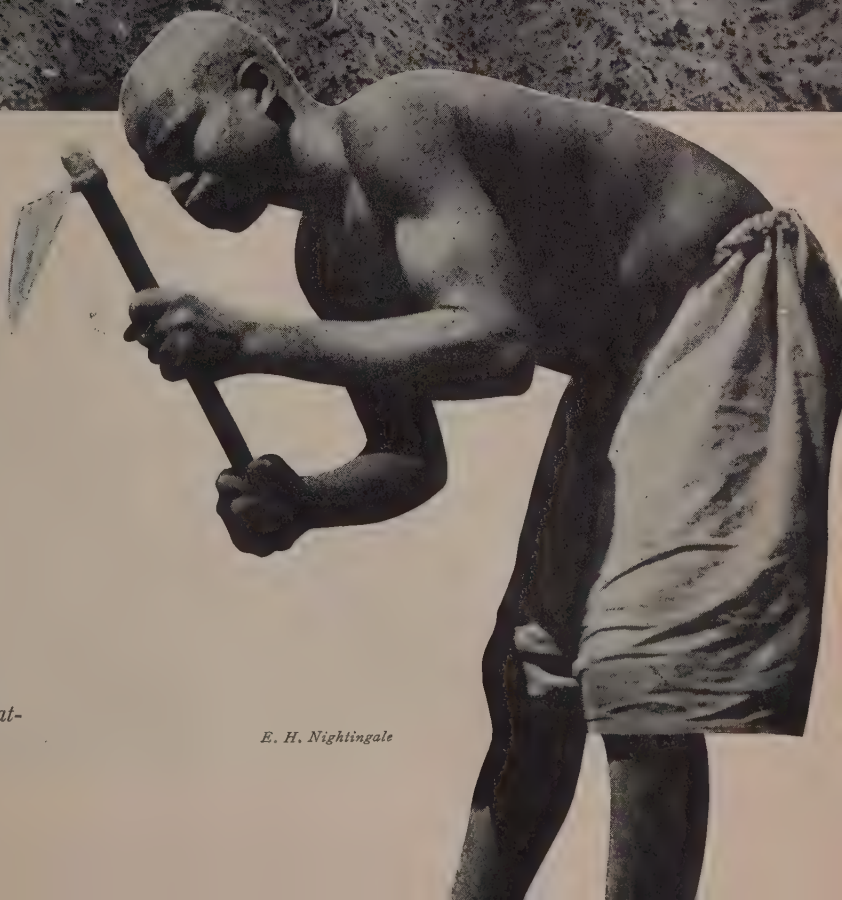
Apart from a general change to drier conditions, if such exists, there are undoubtedly minor changes of rainfall, perhaps of a cyclical nature. Most important of these are the eleven-year cycles associated with sun spots, which it seems make themselves felt more in tropical than temperate latitudes because of the more regular annual cycle.



E. B. Worthington

The primitive hoe being wielded by this African is today being replaced by the ox-drawn plough.

(Above) A simple form of plough is being used to good effect on an experimental farm in the Northern Territories of the Gold Coast. Animals are there and elsewhere being specially bred for the dual purposes of draught and milking, and to set an example in mixed farming. Some success is also being attained in breeding oxen which are not susceptible to the devastating typanosomiasis, carried by tsetse flies



E. H. Nightingale



E. B. Worthington



E. B. Worthington

Opposite are two photographs taken by the author in West Africa in 1935 to show what is being done there to defeat the insect pests. (Top left) Drainage in a swamp near Lagos, Nigeria, to get rid of mosquitoes and malaria. (Bottom left) Cleared and burned Bush by a stream in the Northern Territories of the Gold Coast to destroy the breeding grounds of tsetse flies

(Right) One of the good metalled roads which now form a network in Uganda. This one cuts through the great Budongo forest which is under 'working plans' to safeguard supplies of timber



E. B. Worthington

In Africa these eleven-year cycles have been recognized in fluctuations of the level of lakes in the East and of rainfall in the West. If they are established over wide areas they may well explain a number of variations in the biological environment: for example, there is already reason to suppose that the periodic outbreaks of locusts, which have caused more sudden and drastic changes in colonial territories than perhaps any other factor, may fit in with the eleven-year scheme; and in Uganda, times of food shortage, caused by the failure of the short rains in the preceding years, appear to be similarly periodic.

Another aspect of water-supply, that of river flow and irrigation, is causing vast changes affecting millions of colonial peoples. Thus the Gezira irrigation scheme in the Sudan (described in this Magazine in May and June 1939) is revolutionizing the social structure of the agriculturalists involved. As another example from a foreign territory, the French irrigation projects in the region of the Middle Niger, where big areas of desert are being put under intensive cultivation, is necessitating the conversion of nomad pas-

toralists, as the only people available, into fixed cultivators.

Other schemes have been suggested in native areas of East Africa now being ravaged by soil erosion, but it is significant that little can be done until the whole region involved is surveyed and mapped to a degree of accuracy far surpassing that of the present.

CULTIVATION TO SUIT THE SOIL

Passing from water to the soil, the deterioration and erosion of soil is perhaps the best example of the rapidity of environmental change. The fact that tropical soils are lost if too much is expected from them has been recognized for centuries by native farmers, who in many colonies devised the system of shifting cultivation to guard against it—the system which is today such a bane to foresters and agriculturalists. Shifting cultivation, involving short periods of cropping followed by long periods of fallow when the land reverts to bush, together with other native practices, such as burning hundreds of square miles of grassland to stimulate the young nutritious shoots and to kill the carriers of animal



E. B. Worthington



(Above) *The Gold Coast hospital near Accra, one of the best native hospitals in the colonies. (Left) Slums in a coast town of West Africa. This photograph was taken a few years ago when one room measuring only 12 feet by 6 feet would be let for a rent of five shillings a month. The site is now occupied by concrete houses*

disease, are admirable practices so long as land is more or less unlimited. They are devastating as soon as the population of human beings and of stock increases, as it is bound to increase throughout the colonies. The balance of nature is upset and, as often, this may lead to disaster.

The problem of the agriculturalist is to change the proportion of cropping years to fallow years by introducing improved methods, such as the rotation of crops and green manuring, with the final object of establishing systems of fixed instead of shifting cultivation, and of mixed farming, by which animals put back into the soil some at least of

the nutriment which is drawn from it. Forests, insect and fungal pests, and wild animals all fit into this picture. The twelve species of tsetse flies, for example, have yet to be beaten on their own ground. They thrive in that great belt of country stretching across Africa between a line from the Senegal River to Italian Somaliland and another from the coast of Angola to Mozambique.

CONTROL OF DISEASES

Of the human being himself, let me illustrate the problem of diseases by reference only to two of those carried by insects, namely, malaria and yellow fever. In the African



E. B. Worthington

Photographs taken by the author during a Fishery Survey of Lake Edward in 1931. (Right) A primitive method of catching fish with baskets. (Above) Part of a catch with improved methods using nets. Since the Survey a fishery has been developed on Lake Edward with an annual catch of 1000 tons of fish worth more than £20,000



colonies nearly every individual, except those living in towns, is infected with malaria before he is three years old. Subsequently he develops at least a partial immunity, because his body as a child is capable of greater adaptation than later on. Splendid work in India, Malaya and elsewhere has shown that mosquitoes and malaria can be eliminated from prescribed areas, but not over the whole of a colony at one time. Hence the elimination of malaria in certain areas is bound to produce another problem in its wake: children in the malaria-free area would grow up healthier and with less mortality, but they would meet the disease as adults when travel-

ling elsewhere, when it would take on a much more serious form.

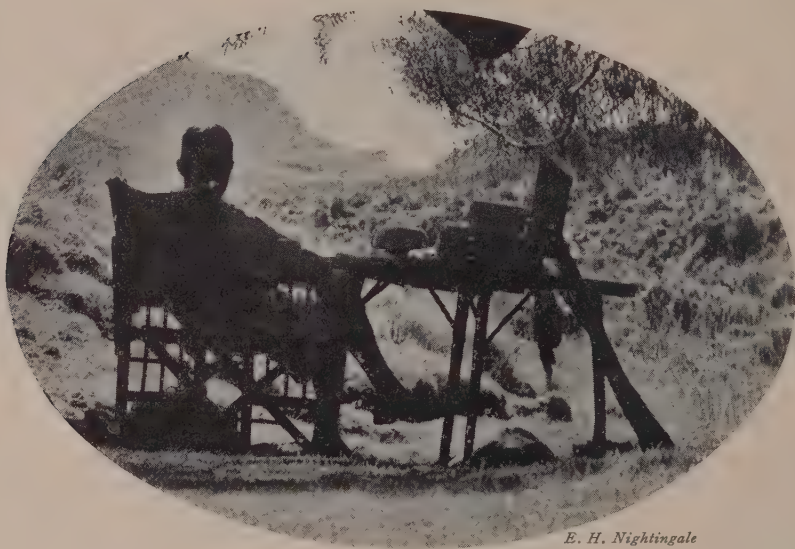
Similarly yellow fever is often contracted at an early age when the patient either dies or attains immunity for life. Recently it has been found that this disease is not restricted to the few areas where obvious epidemics occur, but extends in dormant form, in Africa for example, through large tracts as far east as Uganda and the Sudan. These areas offer opportunities, through the agency of air transport, for the disease to spread far afield, where the yellow-fever mosquito is abundant but the disease has never appeared. Unless the most careful control is imposed it might

go, not only to the huge populations in eastern and southern Africa, but even to other continents.

THE TWO BIGGEST PROBLEMS

I have mentioned a few problems, particularly as they affect the native inhabitants of the colonies. This point of view is justified because it is and will remain the policy of Britain, as compared with that, say, of the Nazis, to regard the colonies as a trust and to *develop* them primarily for the eventual benefit of their original inhabitants, rather than to *exploit* them for the benefit of outsiders.

If asked to state the two biggest problems of all, I would answer: First, to raise the standard of life of each and every member of the public, by which I mean, introduce better housing, better food, better water-supplies and sanitation, and more useful employment of leisure. Secondly, to save all that is good, remembering that there is a great deal of it, in the old life. Of the second problem there is no space to write: like the first it involves cooperation between all, and also an understanding of the social structure and habits of peoples more profound than that generally available today.



E. H. Nightingale



Invasion Threatened Britain

I. Napoleon's Schemes

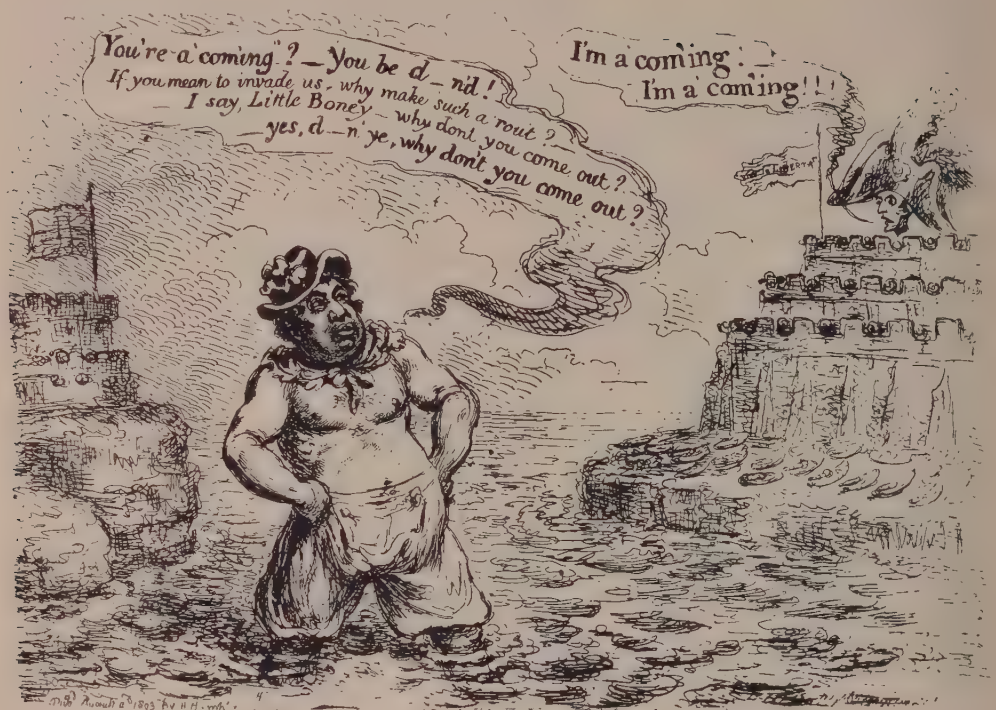
by ADMIRAL SIR HERBERT RICHMOND, K.C.B.

*They swear they'll invade us these terrible foes
They frighten our women our children our beaux
But should their flat bottoms in darkness get o'er
Still Britons they'll find to receive them on shore*

—so the doggerel verse of the day, which shows that our grandfathers knew how to meet the sabre-rattling and threats of their enemies. The short series of articles inaugurated here by Admiral Sir Herbert Richmond will recall the nature and extent of some of those threats

WAR, Napoleon once said, is a matter of positions. Because this is so the foreign policy of Britain, thoroughly alive to the 'strategy of positions', had, for a long time before Napoleon appeared on the international stage, been largely governed by the recognized need of preventing a potential enemy from establishing himself in certain areas

from which a descent upon the shores of this country would be facilitated. Hence, many generations of British statesmen had focussed their eyes upon four areas: Ireland; the coast of Brittany with its deep-water harbours, particularly Brest; the Straits of Dover with the shoal water ports on the French side, and the Low Countries. Cherbourg was not as



The Cruikshank cartoon on the previous page and this one, both of 1803, reflect the warmth of popular feeling aroused in Britain by Napoleon's attempts at invasion

yet of great importance—it was not developed till the time of Napoleon III—and St Malo, though a very important privateer port, was not a major position. Its anchorage was limited, its approaches difficult through tortuous rocky passages and swept by strong tides, so that large bodies of heavy ships could not navigate with the ease and freedom necessary in a fleet base.

The importance of Ireland needs little comment. It lies like a breakwater across the approaches to England, with excellent harbours on the ocean and in the Irish Sea, whence a short sea passage in comparatively sheltered waters would bring ships to the West Coast of England and to Bristol, the second port in the Kingdom, every consideration of security demanded that the island should not be in the hands of any other power; and a neutral Ireland was only one degree less dangerous since the ports to the westward were of high importance as bases

for the navy, both for the protection of trade and defence of the island against invasion.

Next there was Brest. If Spain, with her combination of naval and military strength, were to occupy Brest, England's security would be jeopardized. The veteran Elizabethan soldier, Sir John Norreys, had pointed out to his Queen that the possession of Brest by the Spaniards "will prove as prejudicial for England as if they had possessed Ireland"—an opinion shared by the great Spanish admiral Pedro Valdez. "Our enemies," he told his King, "fear that if the port of Brest is faithful to your Majesty it will injure them greatly, and doubtless your Majesty will endeavour to obtain possession of it" (*Calendar of State Papers, 1586-90*). Hence in part followed the support given by Elizabeth to Henri IV in the defence of Brest and Crozon, in which the noble Frobisher's adventurous life came to an end. But by Napoleon's time

INVASION THREATENED BRITAIN

there was no question of keeping Brest out of the hands of the enemy, for now France was that enemy and had herself become a naval power with a well developed and strongly fortified arsenal at that port. The only way to mitigate the advantage of position was to keep a vigilant and powerful watch, which in turn demanded a great increase in naval strength on the part of England.

We of today, who see the west coast ports of France in the hands of our enemy and the power which that occupation confers upon him in his attack on our Atlantic trade, are well able to realize the sentiments of the Elizabethans and the aptness of the Queen's remark that the last days of France would be the last also of England.

At the other end of the Channel lay the Low Countries. As early as the days of the Plantagenets the ownership of those territories was regarded as an English interest. In the Middle Ages the Hanseatic League, whose fleet controlled the Baltic and to a great extent the North Sea and which had its seat in London whence it influenced the trading policy of the English, constituted a threat to England. For more than once, in the Wars of the Roses, the League had interfered in the domestic affairs of the country, giving

help, in association with the Dukes of Burgundy, to one or another of the rival houses by means of military expeditions from the ports of Flanders, as their 20th-century successors were to interfere in the internal affairs of Spain. When Elizabethan England lay under a threat from Spain the danger of invasion to which she would be exposed from Spanish rule in the Low Countries was plain to all men. "If the nation of Spain," said the Queen, "should make a conquest of those countries . . . in that danger our self our countries and our people would shortly be" (*Somers's Tracts*, vol. i.). And it was to prevent "the access and planting of the great forces of the Spaniards so near to our countries" that the Queen sent an army of 4000 foot and 400 horse to assist the Dutch in their resistance in 1585.

What was true, geographically, when English life and liberty were threatened by Spain was no less true when France or any other aggressive Power arose in Europe. It became an axiom to the rulers of Britain that the occupation of the delta of the three great rivers, Scheldt, Meuse and Rhine, by a great naval and military Power would be a perpetual danger to England. No such nation, with wealth and shipbuilding capacity and



Stanford, London



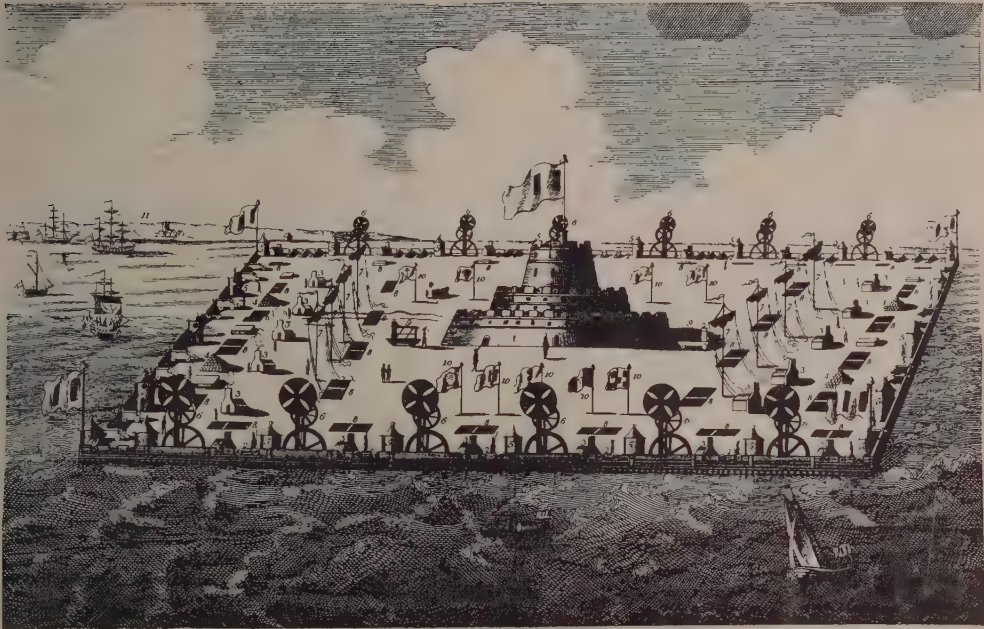
The threefold invasion of England from France: by air, sea and tunnel—an example of wishful thinking on the part of Napoleon perpetuated by this print published in 1803. The picture opposite shows an earlier attempt, of 1798, by raft

resources, with ports capable of harbouring a fleet of ships, great and small, could be allowed to establish itself and build an impregnable base within a few hours' sail of the Thames and London.

Napoleonic war was characterized by great mass movements, the concentration of the utmost strength to deliver a decisive blow. Disposing of greater forces than his Bourbon predecessors, who had no system of conscription, he could plan his schemes on a far larger scale than they. While their invasiory plans—and they were many—depended to a great extent upon the use of transport ships (though the main body of the Spanish army in 1588 had been intended to cross the Straits in light craft from the Flemish ports) sailing from the deep water ports of the west, he concentrated his main efforts upon the harbours of the Narrow Seas; for there he could assemble a great flotilla of small vessels which could carry many more troops and artillery than transport ships, besides being able to

disembark them more quickly in a greater number of places.

The Emperor's great difficulty lay in the fact that the barges could not face the British flotillas of frigates, gun-brigs and other armed craft which, with a backing of a few ships of the line stationed in the Downs, dominated the transport craft, armed and numerous though they were. He was therefore obliged to devise complicated manœuvres by means of which to bring his heavier ships up Channel from their base at Brest to protect the army on its short cross-Channel passage. Those manœuvres aimed at effecting a concentration in the Channel of the squadrons from the distant ports—Toulon, Rochefort, Cadiz, Cartagena—which, after overwhelming the British fleet which blockaded the fleet at Brest, would release the latter and, sweeping up Channel, drive off or destroy the weaker British flotilla of light craft. Six hours' control of the Straits of Dover was all he asked to give him the conquest of the world.



THE GREAT RAFT, NOW BUILDING AT BREST.
 700 YARDS LONG, and 350 BROAD,
 ENGRAVED FROM THE MODEL presented to the FRENCH DIRECTORY

1 The Mast
 2 The Brest Mark Bazaar's monument, upon
 3 The Furnace for heating the Balls, Cooking the
 4 The Parade of Balls
 5 The Magazine
 6 The Windmill to Work a Water Wheel

7 The Mast to hoist Sails on occasion
 8 The Helix that the Raft to get at Water the
 9 The Helix that the Raft to get at Water the
 10 The Helix that the Raft to get at Water the
 11 The Helix that the Raft to get at Water the
 12 The Helix that the Raft to get at Water the

Thus the great obstacle to the invasion schemes was the three hundred miles of water which separated the fleet base at Brest from the barge ports in the Straits of Dover; three hundred miles of narrow water in which the navigation of a fleet of great ships, awkward to handle except by very skilled seamen, was not easy even if the winds were fair; and they might change.

This was of course no new problem in Napoleon's time. The acquisition of deep water ports in the Low Countries had, as we well know, been a long-established wish of earlier French strategists. The immediate cause of the British intervention in the war with France in 1793 was interference by the Jacobin Government in the Low Countries and the Scheldt.

To build and establish a large naval base at Antwerp had been one of the first of Napoleon's acts when he came into power, and his refusal to give up his hold upon Holland, which placed him in so strong a

position against England, was one of the primary causes of the renewal of war in 1803. By his retention of the Low Countries he held, as the Germans hold today, all the ports from the Texel to Brest. But though he held the ports he was unable to make full use of them, for in spite of being able to move some great ships to Antwerp at a later stage he never was able to concentrate a large fleet there; nor, though he had built his yards, to store them with the naval stores needed by a fleet. During the two invasion periods of 1800-1801 and 1803-5 he had no fleet of heavy ships in the eastern ports; his battle fleet and transports were kept apart and the former could not support the latter since all the wideflung schemes of movements from Toulon and other ports to the West Indies and back were foiled by the persistence and vigilance of the British fleets.

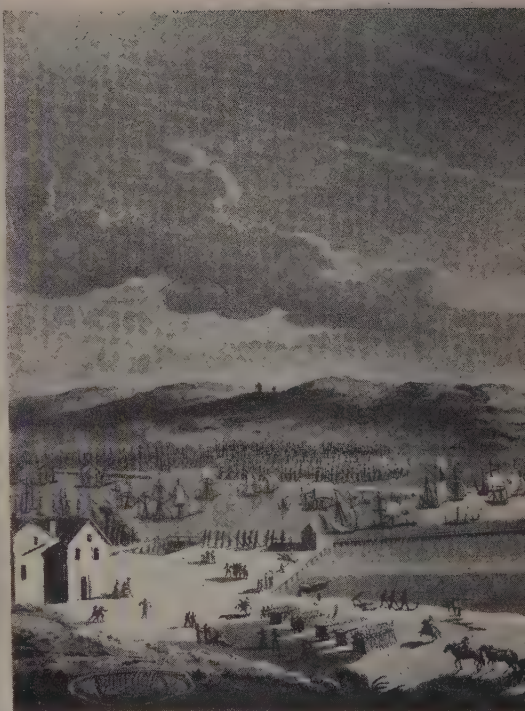
The failure of the invasionary attempt of 1805 did not lull the British into any attitude of complacency concerning the importance

of the Low Countries: their determination to eject the French from those territories was in no way diminished. If anything, the experience, so far from persuading them that the possession of those ports was unimportant, had the contrary effect. By demonstrating so clearly the difficulties of an invasion—which depended on the support of a fleet from Brest, it enhanced in their eyes the importance of the Low Countries.

The Walcheren expedition of 1809 had as one of its objects the destruction of the naval base and the shipping at Antwerp; and in 1805 Pitt drew up a programme of strategical policy in which he included among the essential objects of the war the entire recovery of the Netherlands and the countries occupied by France on the left bank of the Rhine, the annexation of part of Belgium by Holland in order to provide a barrier to the latter country, and the transfer of the other part to Prussia. Thereby Holland and Belgium, if attacked by France, could turn to Prussia and the other German states for help.

At the peace in 1815 Castlereagh put this design forward with the result that Belgium was joined to Holland, and Prussia was given large districts on the left bank of the Rhine. His reasons make perhaps curious reading to us of today who have witnessed the last seventy years of Prussian aggression. "I know", he wrote, concerning this latter transfer, "that there may be objections to this, as placing a Power peculiarly military, and consequently somewhat encroaching, so extensively in contact with Holland and the Low Countries. But as this is only a secondary danger we should not sacrifice it to our first object, which is to provide effectually against the systematic views of France to possess herself of the Low Countries on the left bank of the Rhine—a plan which, however discountenanced by the present French Government, will infallibly revive, whenever circumstances favour its execution." Thus the "geographical strategy", or strategy of positions, which had begun even before the Elizabethan dangers brought it to a head, was consistently followed in the Napoleonic era.

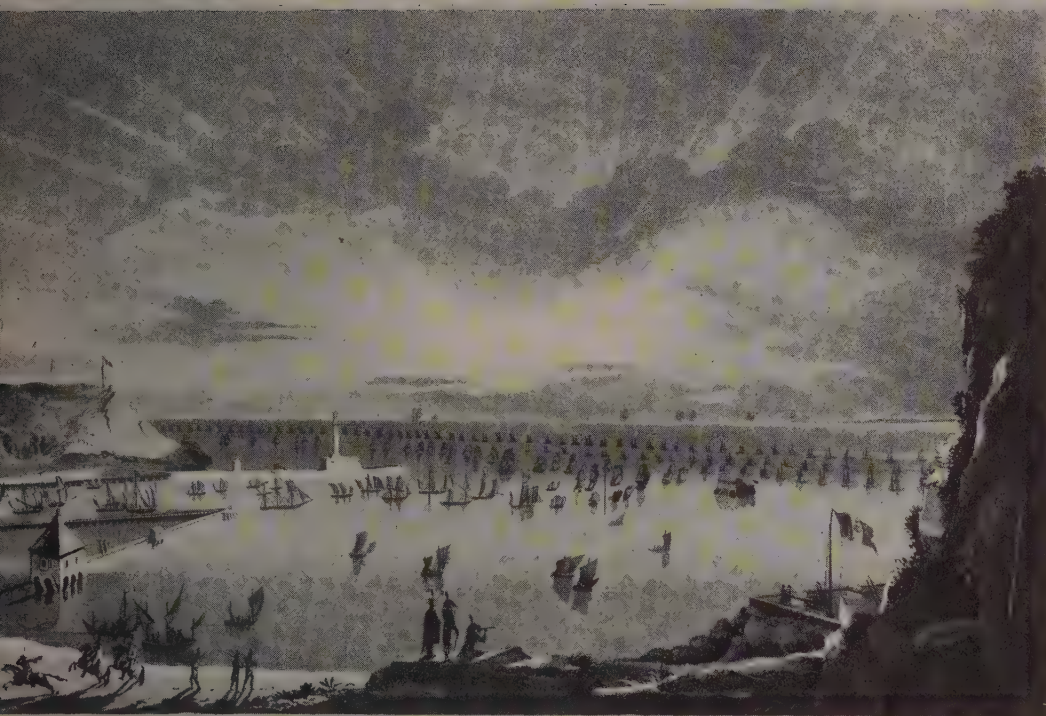
In the beginning of the great war with France in 1793 the ports on the Channel at which preparations for invasion were made were Calais, Havre, Dieppe, Cherbourg, Granville, St Malo and Brest, a total number of 100,000 troops being disposed, in varying



An early 19th-century print showing a French flotilla,

numbers, in those ports. Four years later still further ports, some of them inland, were brought into the schemes—Honfleur, Caen, Fécamp, St Valéry-en-Caux, Rouen, Calais, Boulogne, Ambleteuse and Étaples, as well as the further eastward harbours of Dunkirk, Ostend and Antwerp. It was soon found that the small harbours in the narrows of the Channel could not be used effectively without considerable deepening and increase of their means of sheltering shipping, and the great difficulty which confronted the French was that of getting a large number of vessels to sea on a single tide.

This same difficulty had been experienced by the Spaniards in 1588, when Dunkirk had proved too shallow for all but the small rowing craft which, heavily laden, were not seaworthy enough to make the Channel



VIEW OF THE PORT OF BOULOGNE,
with part of its FLOTILLA.

assembled in Boulogne harbour, about to set sail for an attack upon England

crossing with safety; and those larger vessels, which it was found must be used, could only put to sea on the top of the spring tides—a factor which, as the English were well aware, greatly circumscribed the activity of the flotilla (Cf. Holland Rose, 'The Failure of the Spanish Armada', *Proceedings of the British Academy*, 1936, p. 215). Owing, therefore, to the limited number of vessels which could put to sea on a single tide from any single port it was necessary to distribute the flotilla among several, and in Napoleon's first invasion schemes the force was organized in four groups of ports: the Flemish group, Flushing, Ostend and Nieuport; the Dover Straits group, Calais, Dunkirk and Boulogne; the mid-Channel group, Dieppe, Cherbourg and Havre; and the western group, St Malo, Brest and the Morbihan. But while the

factors of accommodation and getting to sea imposed this wide distribution, the need remained for concentration in the actual operation of invasion. The whole force must be brought together for the battle of the crossing and the landing and the problem before the seamen was that of effecting this assembly at one spot, Boulogne. The doing of this proved difficult in the face of the active British flotillas in the Channel, which fell upon the detachments as they attempted to creep along inshore to reach the central rendezvous.

In the scheme which the Emperor designed when war broke out again in 1803 a greater degree of concentration was provided for. Instead of distributing his flotilla over so long a stretch of coast he massed it between a smaller number of ports—Boulogne, Étapes,



A Rowlandson drawing of 1799: Volunteer for home defence from 'Cripplegate Ward without'

Ambleteuse, Wimereux, Calais and Ostend—a very great deal of work in the way of deepening the harbours, building training walls and wharves, being necessary to increase the accommodation and facilities for exit from the narrow entrances. Nevertheless, for all these engineering improvements as well as constant exercises in embarkation of troops and the development of an extensive organization for the movement of the numerous vessels concerned, the problem of getting the whole of the forces to sea on a single tide was never mastered.

It was calculated that no less than six days were needed to get the whole expedition into open water, and while this operation was in progress those barges which were first out had to lie for the ensuing days off shore, behind such shelter from the sea as the sandbanks afforded and with such protection from attack by the British gunboats and frigates as the shore batteries could give. During this time the unfortunate soldiers, most of whom were wholly unaccustomed to the sea, suffered from sickness and the meagre rations which the craft carried; and at any moment the wind might change and render the attempt impossible. Thus the lack of good harbours was an element of the very highest influence in the affair.

Weather was a factor which the Emperor had to take into consideration. Long nights gave the best chances of evasion and the time needed for effecting the crossing; fogs, too, would favour concealment. Hence, in the first stages of the enterprise the winter season was selected. But as time passed and Napoleon realized more fully the unseaworthy character of so many of his craft he altered his views and planned to make the attempt in the late summer when finer weather might be expected. On one occasion of a practice sortie from one of the Flemish ports the men suffered so much from the rough water that a mutiny took place, the troops declaring they preferred to be shot rather than face the danger of drowning and the discomforts of the sea passage.

While the main effort in all the designs—and there were many—was to be made by the massed body in the ports of the Narrow Sea the designs always included other subsidiary and contributory movements the objects of

which were primarily diversionary. Here France's oversea colonies and the scattered responsibilities of the British in trade and colonies played their parts; for the French had in their colonies positions abroad where rendezvous could be arranged; the British shipping and colonies offered a number of points against which to strike.

Ireland, as in the earlier wars, was always a tempting place at which to give trouble, and the deep water ports in the Bay and at the Texel were the natural starting points for bodies of troops and supplies of arms to that island. In the scheme designed for 1804 two forces, one from Brest and one from the Texel, were to sail for Ireland, timing their movement to coincide with an attempt at landing on the coast of Kent. The Irish force had a diversionary intention; but it contained the essential element in a well-designed diversion, that if it were not successfully dealt with it might itself produce decisive results. One or other of the two operations was fully expected by Napoleon to succeed—"and then, whether I have 30,000 or 40,000 men in Ireland, or am in both England and Ireland, the war is ours". So wrote the Emperor to his admiral, Decrès.

Sporadic attacks on the valuable sugar islands in the West Indies, on the trade of the Indian Ocean and on the settlements in West Africa formed parts of some of the plans. Their great object was to force England to dissipate her troops and ships for the defence of these many and important possessions and interests; which is what the German 'raiders' in the Indian Ocean, South Atlantic and Pacific are trying to do today. The calcula-

tion was that as the British could not tell which of their many vulnerable spots would be attacked they would be obliged to defend them all, and therefore would have to detach, from their main body in the Channel, far more numerous forces of ships of the line than those employed in the attack. As General d'Amade has said, "The offensive has the eternal advantage that, knowing where the blow is to be delivered it needs to be strong at that point only, while the defensive, ignorant of where the blow will fall, must be strong throughout the whole front".

The 'whole front' in the case of the British Empire was its trade-routes and principal harbours in all parts of the world. The most effective protection, as the Admiralty was well aware, would be an assured blockade of the points of departure of such expeditions, the naval bases of France and her allies. In other words, the security of the Empire which Pitt had to defend had its focus of effort in the offing of Brest. Whether it were the invasion of the mother country or any of its dependent parts oversea, or the attack upon its lines of communication, this was the decisive point, in this spot it was essential to ensure superiority over any combination the enemy might devise; and when an enemy force sailed and, by the vagaries of the fortunes in sea warfare, was lost sight of, it was to this spot that the scattered squadrons from other parts at once gravitated. So long as that fleet to the westward was in its position in full strength and the light craft in the Channel were ready to fall upon the barges and destroy them, the country and the liberty for which it was fighting were safe.



A medal, now in the British Museum, struck by Napoleon to commemorate the invasion of Britain. The words on the reverse are: Descente en Angleterre



E.N.A.

A Farewell to Rio

by ANTHONY HAIGH

In this reminiscent article Mr Haigh describes the Brazilian capital, Rio de Janeiro, and the attachment he came to feel for it in the course of a two-year official residence

I REMEMBER well with what feeling of eagerness I had approached Brazil—an eagerness to learn something of the nature of this new land which for some years was to be my home. I was no stranger to the tropics; but I had never before been under the southern sky. There was something unusual about this mountainous coast, covered with vegetation of an intense green, with here and there a tree standing solitary and defiant on the far and lofty skyline. Its most striking characteristic was the thin white line, straight and gleaming, interrupted here and there by rocks, but always reappearing, which marked the firmly-

ruled division between sea and land. For hundreds upon hundreds of miles it stretches, Brazil's hem of the finest white sand, which squeaks beneath your toes as you run over it to bathe—quickly, where it is dry, for during much of the year it is so hot as to burn the soles of your feet, and you make for the water's edge where the cooling sea has rendered it pleasant to the touch. An artist in water-colours, whom I came to know in Rio, had been as much struck as I by this persistent Brazilian *praia*, and brought it out in her pictures by leaving between land and ocean a thin line of paper untouched by paint.

Among prints of old Brazil there is one which holds for me an especial fascination. It is to be found in Debret's *Voyage pittoresque et historique au Brésil* and depicts the Largo do Paço or Palace Square at Rio de Janeiro. Jean Baptiste Debret, with his fellow-members of an artistic mission despatched by the French Académie des Beaux-Arts, arrived at Rio de Janeiro in 1816 and remained in Brazil until 1831. His print therefore shows the Largo do Paço as it was when the 'Paço' was the town residence of Brazil's first Emperor—the Quinta (Park) da Boa Vista was at that time still beyond the confines of the town. In the foreground is seen the Caés (Quay) Pharoux, where African negroes were landed to be sold into slavery. The time came when no more slaves were landed, and later still all the slaves were declared free. And in the following year, in November of 1889, at two o'clock one morning, Brazil's second Emperor emerged from the Imperial Chapel with the Empress and his family into the Largo do Paço. They crossed to the Caés Pharoux where a launch was waiting to take them to their ship; for the Empire was no more, and Dom Pedro II was going into lifelong exile. A republic had been declared three days before; and so the Largo do Paço lost its name and received instead a date—Praça Quinze de Novembro, the Square of November 15.

Over this Praça Quinze de Novembro I used to look daily from an office window on the second floor of the Edifício Anglo-Mex. Most of the square itself was hidden from me by the bushy heads of the trees planted along it in rows. Through these tree-tops, and not far from my window, rose the pointed pinnacle of some monument, surmounted by an armillary sphere. The greater part of the monument itself was invisible to me, and the armillary sphere seemed somehow to have no roots upon the earth. It floated high on the sea of leaves, and I believe I should have felt regret rather than surprise if I had found one day that it had floated away.

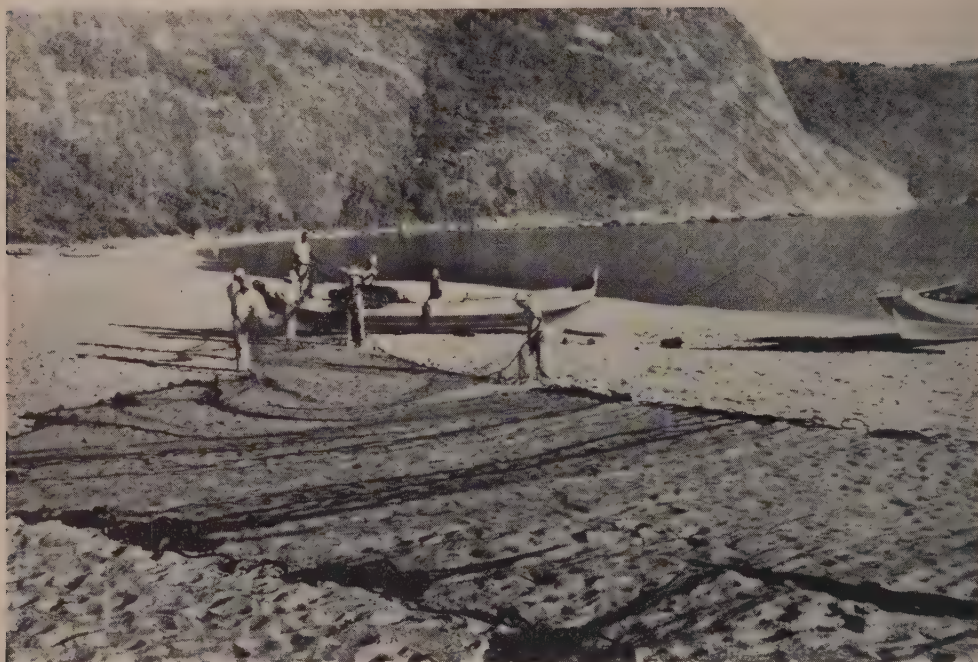
My Praça Quinze de Novembro was not in all respects identical with Debret's Largo do Paço. The fish in Guanabara Bay have at least one experience in common with those off the Italian coasts which, if we are to believe Horace, felt the waters draw in on them owing to the habit prevalent among wealthy Romans

of building out into the sea. Rio too is constantly encroaching upon its bay, and has even removed the Castello hill, dumped it into the sea, and built upon it the quadruple roadway and tidy gardens of the Praça Paris, whose fountains send forth many-coloured illuminated jets on Riachuelo night. So too has the Praça Quinze enlarged its one open side and overrun by some little distance the old Caés Pharoux. One corner of it has been devoted to a paddle-boat station for Nictheroy and the islands, the centre has become a parking-place for cars and taxis, and more and taller buildings have arisen than were known to the old Largo do Paço. But the Palace itself remains—turned now into a Government office—and the cathedral has not changed since it was drawn by Debret.

Glimpses of all these things could be caught from my second-floor window, and more besides. Above the armillary sphere itself, and over the tops of the buildings flanking the Paço, I could see the Sugar Loaf, standing guard at the narrow entrance to Guanabara Bay, and part of the cable-way by which its summit is reached. And then to the left there was that sight which one will not forget, the view over the Guanabara itself, and across to Nictheroy, and to Jurujuba Bay beside it, and the silent, watching mountains beyond. If you are not moved by these things—well, there is always the shipping.

The natural way to reach Rio, whether from Europe, or from North America, or even from most other parts of Brazil itself, is by sea. When you wish to meet a friend arriving at Rio, you go down the principal street of the city—the Avenida Rio Branco, with its bull's-eye pattern tessellated pavements—until you reach the large Praça Mauá. And there you are: for the entrance to the docks is in the Praça Mauá, and as like as not your friend's ship will berth so as to command a view right up the Avenida. Equally accessible is the new airport, which at the time I left was about to be constructed on a tongue of land then in process of being run out to sea from the Ponta do Calabouço.

More convenient still, there is no need to be constantly ringing up the agents to find out when the ship will be in. You see her come into the bay, where she stops to pick up the medical and customs authorities and the



Black Star

For hundreds of miles along the coast of Brazil stretches a hem of fine white sand which squeaks beneath your toes as you run over it to bathe

police. In an hour from then, if all goes well, the formalities will have been completed and she will be alongside.

So it was that on a hot summer's day, towards the end of January, I watched a large white ship glide slowly into Guanabara Bay—the ship that was to take me away from Brazil. From my second-floor window in the Praça Quinze I saw her approach, three years to the day—even to the hour—from the time when I myself had first entered the bay of Rio de Janeiro. That day had been as hot as was this one, and had seemed much hotter to me who had left England in winter only a fortnight before.

I had of course read descriptions of Guanabara Bay, than which it appeared no larger bay existed in the world, with its single narrow entrance giving on to waters that stretched beyond sight, enclosing an island for every day in the year, and dominated on all sides by monster mountains. At its entrance stood the

sentinel Sugar Loaf, on the right were the rather amorphous mountains behind Nictheroy, on the left a number of hills rising out of the city of Rio de Janeiro itself, overtopped by the lonely Corcovado, on which stood a huge figure of the Christ, with arms outstretched to north and south, the thumbs of his hands each the size of a man. Behind this, the somewhat remoter outline of the Tijuca massif argued yet higher peaks; and straight ahead of the ship, beginning some way back from the northern waters of the bay, stood the rampart of the Organ Mountains, a solid wall across the sky, rising to three thousand feet, behind which the plateau, rich in minerals, of Minas Geraes slopes gently downwards in the direction of the central forests.

Not only had I read of all this, but on the voyage I had been told again and again that here was a sight which would fill me with wonder, that I might count myself lucky that I still had to enjoy the experience of seeing the



Black Star

Praça Mauá and the docks, in which two Argentine ships paying a good-will visit to Rio are berthed. A parade of Naval Cadets is taking place on board

bay of Rio de Janeiro for the first time. Now I was seeing it for the first time; and I was conscious of a feeling of bathos. It was remarkable, certainly; by analysing its components I was able to arrive at an intellectual appreciation of its merits; but my emotions refused to become involved, and I felt a little disappointed in myself.

But that had been three years ago. Now I looked from a second-floor window in the Praça Quinze upon a white ship entering the bay, a very different person from the one whose heart had not been stirred by his first sight of Rio de Janeiro three years before. For Rio had become my home; and now it would be no more my home, for the white ship had come to take me away. During two days she lay alongside the Praça Mauá, and on the morning of the third day I embarked in her and took my leave of something that had become a part of my life.

As the white ship steamed out of the bay I

could imagine the Portuguese naming the mountains when they first saw them. The sugar-loaf entrance pillar naturally had to be the Pão de Assucar (cone of sugar); the lower hill behind it suggested the poop of a particular kind of Dutch sailing-ship and became the Urca as the ship is called in Portuguese; twin peaks further to the westward were inevitably the Two Brothers; and the impressive turret behind them, calling to mind the top of a mainsail, was designated the Gavea, its Portuguese name. Dominating the bay and the other mountains, a hump-backed peak was called Corcovado (hunchback) and the bay itself—its discoverer, Amerigo Vespucci, taking it to be the estuary of some huge river—was named 'River of January' since it was on January 1, 1502 that he discovered it. In 1567 Mem de Sá, leader of a Portuguese expedition, after defeating the French in the bay, founded on its shores the City of St Sebastian of Rio de Janeiro—or rather



From 'Bonington'. By Andrew Shirley. (Kegan Paul)

Rio Harbour above, in the days of sail, with the Sugar Loaf standing out in sunlight. From a print now in the British Museum after the picture by Bonington (1801-1828). (Below) Looking down on the suburb of Gavea and the Lagoon of Rodrigo de Freitas from the summit of Corcovado





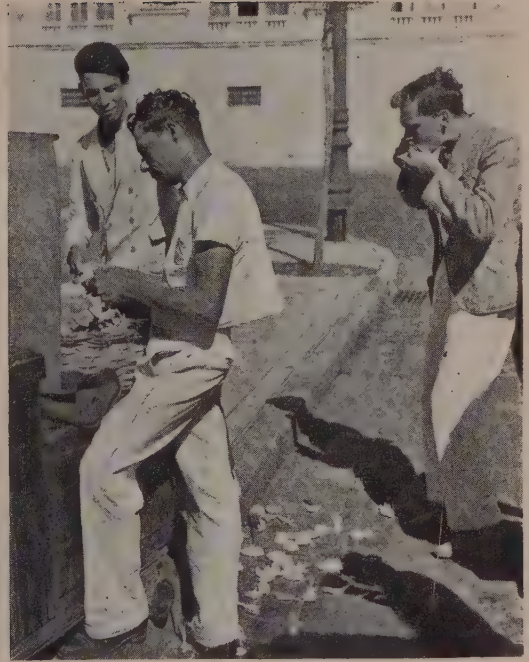
E. N. A.

Rio's Botanical Gardens. Beyond is Corcovado on which the huge figure of Christ can just be seen



Black Star

The Avenida Rio Branco with its bull's-eye pattern tessellated pavements. It is the principal street of 'the City of St Sebastian' and contains some of its most important buildings



Black Star

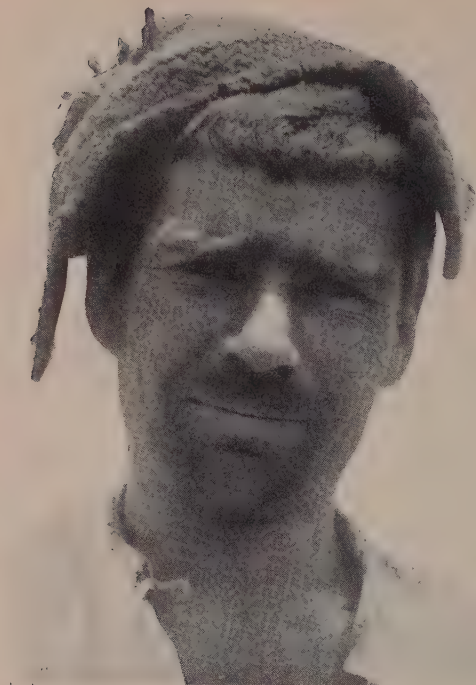
In the streets of Rio: (left) the padeiro or bread seller delivers 'French bread' fresh at your door every morning. (Right) The kerbside trader finds a ready market for his succulent oranges

refounded it. For his nephew, Epitacio de Sá, had already founded a settlement of that name at a different spot on the shores of the bay two years before. The refounded city of St Sebastian is now known by the name of the hypothetical river on whose banks it was supposed to stand and the bay itself has reverted to its Tupí designation, the Lagoon, Guanabara. The town which faces Rio de Janeiro on the opposite shore of the Guanabara is the capital of the State of Rio de Janeiro and is also called after the water beside which it stands, but in Tupí, for its name is Nictheroy, or Sheltered Bay.

Out of this bay of divers names the white ship slowly steamed. On the one side we left many mountains from whose summits I had gazed down upon the relief-map of a city. From one of the highest of them I had watched the sun sink behind a range of mountains further to the west and invisible from lower levels: a chilling breeze had come up as the

daylight had died away first from the valleys, then from the slopes, and lastly from the peaks themselves, but I had stayed to see the lamps spring suddenly on in sections all over the sprawling city below, and had then scrambled hurriedly, before the twilight had entirely faded, down the steep ten-minutes descent to where a more gently-sloping path could be followed by moonlight. And on the other side of the ship were receding the eastern mountains over which I had seen the loveliest sunrise of my life pour a deep but ever-paling red glow upon the clouds that hung over the city, until the sun himself had come up into full view and the last lurking shreds of darkness had melted into the ground and been absorbed.

Now we were out of the bay and headed eastwards, and the voyage had begun which was to take me to many new lands before I reached my destination at the very opposite side of the world.



Bird Islands off Madeira

II. Great Salvage Island

by R. M. LOCKLEY

Last month Mr Lockley described the Desertas and Porto Santo and the birds he went there to observe. The second stage of his visit to the Portuguese Atlantic islands took him 180 miles south to the Salvage Islands, one of whose guano workers is shown here

ALTHOUGH the Salvage Islands lie nearly a hundred miles nearer to the Canary Islands than they do to Madeira, they are nevertheless not a Spanish possession. They were first occupied by the Portuguese, and are still part of Portugal's considerable empire. And so it came about that we sailed to the Salvages in a Portuguese boat from Madeira.

So few British, or indeed other Europeans except Madeirans, have set foot on the remote hump of volcanic rock which is known as Great Salvage Island, that we were delighted when we found that our visit had coincided with the sailing of a small cargo-boat for the group.

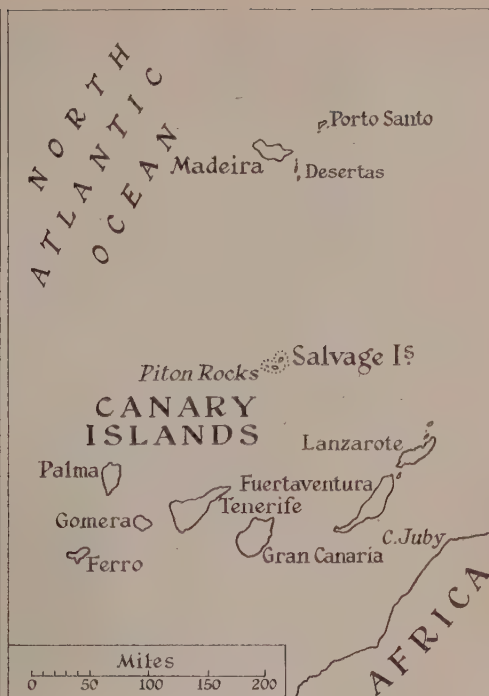
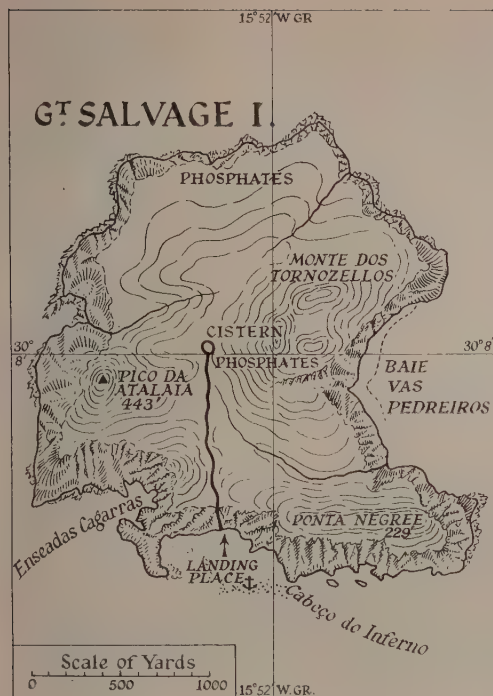
The *Butio* was little larger than a large tug, but, with the steady trade wind behind us, we moved along pretty smoothly on a line almost due south from Funchal harbour. The lower deck was filled with Madeiran labourers and fishermen, and on the bridge deck, under a canvas awning, were gathered the officials of the expedition: the business man who worked the phosphatic deposits of Great Salvage, some of his friends out for a cruise, a priest or two on holiday as collectors of insects and plants, and ourselves.

It was mid-July and very warm. A bare sky, a deep-blue sea, and flying-fish rising and falling with the same gentle frequency as our lurching bow—these things lulled us to sleep during most of the long day. It was with a start that we were awakened by the bustle of arrival at the Great Salvage anchorage.

There was no light to guide us, and at first our sleep-heavy eyes could not even locate the shore-line. The pilot had steered, he said, by the noise, by the gradually increasing roar of the night-birds, or as he called them 'cagarras'—the noise first, and then the faint white line of the surf on the volcanic rocks.

We have lived on many small islands inhabited by the nocturnal petrels and shearwaters, and have heard the various types of bedlam from these birds in these wild places. But the uproar from the island of Great Salvage surpassed all our previous experience.

Instantly we were anxious to be in the thick of it. We got into the small boat and rowed ashore, the hour being then barely 1 A.M. Some of the labourers living on the island had been roused from sleep, and had come down to the shore carrying stick torches, the light



Stanford, London

from which, throwing their half-naked bodies and wild unkempt heads into relief, added to the savage appearance of that lonely spot and gave emphasis to the blood-curdling screams of the shearwaters which now swept past our heads, or stood in our path at every step up the steep shore.

The North Atlantic great shearwater, known to science as *Puffinus kuhlii borealis*, is, so to speak, the big noise on Great Salvage. It is as large as a very large gull, dark brown above and white below, with a long hooked bill capable, as we soon found, of inflicting a nasty wound upon the intruder's hand. We found it nesting in every sizable cranny and hole on the island, and at this time of year it was incubating a single large white egg. The lessee of the island had told us that the bird was a valuable source of income; he did not permit the adults or eggs to be molested, but every autumn all the accessible young birds were collected just before they were fledged. They were very fat, and were sold in Madeira as a delicacy for good prices.

The night passed by swiftly, all too swiftly for the two fascinated bird-lovers who

wandered over the stony ground, flashing torches on the birds, trying to study their strange nocturnal domesticity. We placed leg-rings on many of the birds that were sitting, in an endeavour to trace the course of their incubation periods and to find out whether both sexes took part, etc.

Besides the great shearwater there were the little shearwater *Puffinus assimilis baroli*, the Madeiran petrel *Oceanodroma castro*, the frigate-petrel *Pelagodroma marina hypoleuca*, and Bulwer's petrel *Bulweria bulwerii*. The little shearwater, a neat black-and-white bird as large as a starling with bright blue legs, had only just started to nest—it was in the early courtship stage, and had not yet laid its single white egg in the smaller holes in the rock and soil. But the dainty long-legged frigate-petrel had well grown young, ready, in some instances, to fly. The third small petrel, the Madeiran petrel, a large edition of our British storm-petrel using holes of the same size, had only just laid its egg. Thus the three species probably divided the year between them, so that each in turn had the use of the small holes on the



Photographs by R. M. Lockley

The Portuguese cargo boat, Butio, lying off Great Salvage Island after the voyage from Madeira. The harbour of the island—

island, almost a necessary provision where suitable small islands are scarce and petrels plentiful.

There are many islands in the Canaries and Cape Verde Islands, as well as in the Azores, which, from the map, look suitable for nesting petrels and shearwaters, but usually these prove, on examination, to be occupied by predatory men, by rats, and other enemies of birds. Great Salvage, from its isolation, and from the fact that until recently it was uninhabited, has attracted these interesting petrels and shearwaters to the extent of acute overcrowding.

The medium-sized species, the all-black wedge-tailed Bulwer's petrel, occupied the medium-sized holes which were too large for the three smaller species and too small for the Atlantic great shearwater. This was the most silent of the five species—it uttered only a low, musical cough or bark, in contrast with the caterwaul of the great shearwater, the scream of the little shearwater, the whine

of the frigate-petrel, and the squeak of the Madeiran petrel.

All the smaller birds returned to their holes or to the sea before it was light. Only the large shearwater remained above ground—it was strong and fierce enough to be able to abandon the natural nocturnal rule of the petrel family. It was afraid of no gull or other predatory bird, and it was scarcely afraid of man. So it was still flying over the island at dawn, and only the rising of the sun eventually sent the last bird skimming to sea, its courtship and ceremonial changing of the guard done for the moment.

We now had light to look about us, to climb to the highest peak, about 300 feet above the sea, and to estimate the extent of the island at about 400 acres. The harbour lay on the south side, and here, where the slopes were less precipitous, were signs of an agriculture long since abandoned. Neatly made walls of stone seemed to act as retainers to the crumbling volcanic soil, but if the soil had ever



—is bound by a rocky creek. In the gas-blown holes of volcanic rock live the Portuguese fishermen and the guano workers

contained vines and other cultivated plants there was now no trace of them. Instead the nicotine plant, *Nicotiana glauca*, flourished, its tall wands and fine leaves providing scant shade for the few small rabbits which scurried about the slopes. These rabbits seemed to live entirely on the fleshy, watery leaves of the ice-plant, *Mesembryanthemum crystallinum*, which covered the ground where there was soil for it to root in. At any rate, these two plants and a kind of sueda were the only vegetation surviving at this midsummer season.

Most of the small bird-holes were on the plateau of the island where a loose soil had gathered in depressions and little valleys, a soil composed of weathered lava mingled with the deposits of centuries of nesting birds. It was this conglomeration, containing valuable phosphates, that the Madeiran lessee of Great Salvage was exploiting. He employed some thirty men to dig out this soil, sift it and carry it in 150-lb. bags down to the

landing-place. The workmen were indentured for four months at a time at a shilling a day. They lived largely on maize-meal porridge and fish, the latter caught by some dozen Madeiran fishermen who also lived on Great Salvage while the phosphate-diggers were present. There was a full-time cook in charge of the feeding arrangements. He tended the great cauldron of porridge, and jealously protected his stores from the little russet mouse which is peculiar to the island, from lizards and cockroaches, by standing everything perishable upon smooth pillars and tubs, up which the vermin could not easily creep. The whole crew lived at the water's edge in the harbour creek, in partially built-up holes in the volcanic rock. A concrete tank collected enough of the winter rains to last the summer's needs in drinking water. The workmen walked a mile to the diggings in the centre of the island each day, and the fishermen sailed their lateens around the island, or journeyed ten miles south to the

sister islet known as the Piton, a small uninhabited hump on our horizon.

The pilot of the *Butio* had warned us that the boat might have to sail any moment, if a ground swell came on—as it often did with sudden violence in this latitude. We were to run as soon as we heard the ship's whistle. Otherwise it would only blow when the cargo of phosphates was loaded, after about a day and a night at anchor.

We made the most of our time ringing and studying the birds. Twenty-six hours of continuous work at last drove us to seek sleep in the fine pebbles of a little cave on the south side, and we were only wakened by the sun and by shots fired by the rabbit-hunting party. They had had a great day, and they returned on board with fifty of these tiny Great Salvage rabbits, which were nevertheless extremely fat on their diet of sunshine and ice-plant. The priests also had had a profitable time—their collecting cases were full of specimens, including some of the nocturnal geckos, which can only be found by

turning over large stones during daylight.

It was not excessively hot even at midday on Great Salvage. The cool northerly trade wind kept the shade temperature steady round about 80 degrees F. The sea also helped to cool us—we scrambled into it whenever the sun became too much for us.

Soon after midday the great shearwaters began to gather along the shore, making great rafts on the sea, and skimming ever and ever closer inshore. At last, long before the sun had set, they were wheeling in thousands over the island, in a weaving soaring pattern as graceful as it was beautiful. It was also a surprise to us, used as we are in Britain to the idea that the petrel tribe are strictly nocturnal. So that when the light clouds became red in the west, tinging the great wings of the cagaras with crimson, the assembly scene was one of pure delight to the ornithologist.

But the ship was now loaded, and the whistle was blowing, and reluctantly we had to move back to the wild creek which serves as landing-place.



Sunset over Great Salvage Island

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